

THE RELATIONSHIP BETWEEN INTERNAL CONFLICT AND
WELL-BEING: A CONTROL THEORY PERSPECTIVE

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Rebecca Erin Kelly

School of Psychological Sciences

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ABSTRACT

A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy in July 2011

Candidate: Rebecca Erin Kelly

Title: The Relationship between Internal Conflict and Well-Being

This thesis explored the relevance of goal conflict for well-being and psychopathology. The thesis incorporates a comprehensive literature review, research into well-being, applied research concerning emotion- and behaviour- regulation difficulties including bipolar disorder, and two intervention studies. The literature review (**Chapter 1**) described four concepts related to goal conflict, clarified the state of the existing literature, and proposed a reconceptualisation of these four concepts within a hierarchical model. This review also highlighted important avenues for future research, and a number of these avenues were pursued in this thesis (**Chapters 2 – 8**). Study 1 tested the possibility that inconsistent findings in previous goal conflict studies might be due to interaction effects. The combination of high ambivalence and low goal conflict related to elevated depression symptoms in a student sample (**Chapter 2**). It was hypothesised that conflict between opposing goals might underlie a range of emotion- and behaviour-regulation difficulties, and two student studies supported this hypothesis. Individuals who held highly important, opposing goals for the regulation of six everyday emotions and behaviours reported more difficulties in managing these emotions and behaviours, in terms of self-ratings (Study 2) and scores on validated measures (Study 3). These difficulties related to general distress and lower well-being (**Chapter 3**). This form of conflict is potentially relevant in mood swings and bipolar disorder. An analogue study (Study 4) explored the relationship between mood symptoms and extreme positive and negative beliefs and appraisals of high, energetic states. Positive appraisals uniquely related to high, activated mood, whilst negative beliefs and appraisals of the same states uniquely related to depression (**Chapter 4**). It was hypothesised that conflict between these opposing appraisals might relate to bipolar disorder, which is characterised by both high and low mood. In Study 5, the combination of opposing extreme positive and extreme negative appraisals of the same internal states discriminated individuals with bipolar disorder from controls and from individuals with unipolar depression (**Chapter 5**). Tenacity in striving for one's goals and flexibility in disengaging from or adapting one's goals may enable the successful reorganisation of conflict when it arises, promoting long-term well-being. Study 6 examined these processes in a large, older adult sample. The combination of high tenacity in goal pursuit and high flexibility in goal adjustment predicted a number of aspects well-being at 10-year follow-up (**Chapter 6**). The final two studies involved investigations of therapeutic approaches to conflict. Study 7 found that an expressive writing intervention reduced the distress caused by ambivalent conflict in an analogue sample with varying levels of depression and anxiety symptoms (**Chapter 7**). In Study 8, individuals with various psychological difficulties received a form of cognitive therapy (Method of Levels) designed to facilitate awareness of higher-level goals and the resolution conflict. Therapist adherence, along with working alliance, predicted client readiness to change, and readiness predicted improvements in symptoms between therapy sessions (**Chapter 8**). Goal conflict seems to be important in determining distress and psychopathology, particularly in the context of emotion-regulation difficulties. Research would benefit from further exploration of therapeutic approaches which target internal goal conflict.

DECLARATION

Data

A portion of the data in Study 4 was collected by Vaneeta Sadhnani for her undergraduate dissertation, submitted in part fulfilment of the degree of Bachelor of Science in Psychology at the University of Manchester (2007). A portion of the data in Study 5 was collected by Alyson Dodd in support of a Philosophical Doctoral degree (PhD) at the University of Manchester, by Ruth Searson, in support of a Doctorate in Clinical Psychology (DClinPsy) at the University of Manchester, and by Yousra Alatiq, in support of a Philosophical Doctoral degree (PhD) at Oxford University. Study 6 involves analysis of data from the Wisconsin Longitudinal Study (WLS) of the University of Wisconsin-Madison. The data file is available for public use at <http://www.ssc.wisc.edu/wlsresearch/data/>. The data in Study 7 was collected by Katherine Shearman and Stephanie Phillips for their undergraduate dissertations, submitted in part fulfilment of the degree of Bachelor of Science in Psychology at the University of Manchester (2009). The work submitted within this thesis addresses different research questions and utilises different approaches to analysis, and thus is substantially different from any work that has been submitted for any degree at this or any other institution.

Published work

This thesis has been produced in alternative format, whereby research chapters are written and presented in a format appropriate for publication in academic peer-reviewed journals in order to facilitate the publication and dissemination of the research findings. Consequently, the literature review section of Chapter 1 is currently under review. Chapter 2 has been published by *Personality and Individual Differences*. Chapter 4 has been accepted for publication at *Cognition and Emotion*. Chapter 5 is in press at *Journal of Affective Disorders*. Chapter 6 is currently under review. Finally, Chapter 7 is in press at *Psychology and Psychotherapy: Theory, Research and Practice*.

Collaborators and authorship

The research presented in this thesis was completed in collaboration with a number of other individuals, including the author's supervisory team. Dr. Warren Mansell and Dr. Alex Wood contributed to the planning and write-up of the research, and thus are recognised as co-authors. The individuals listed above, who contributed to recruitment and data collection, are also recognised as authors on the papers that they contributed to. Miriam Samad, a Research Assistant at the University of Manchester, also provided assistance with recruitment and data collection, and as such is recognised as an author where applicable.

Analysis and write-up

All analyses were undertaken solely by the author of this thesis, with information and advice provided by the supervisory team. All write-up was solely the work of the author of this thesis, with the supervisory team and co-authors providing feedback on early drafts and all co-authors approving the final articles.

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CHAPTER 1: INTRODUCTION AND METHODOLOGY

1.1. Overview

This chapter will introduce the topic of this thesis; the relationship between internal conflict and well-being; and underline the importance of the research in this thesis. This chapter will then report on an integrative review of the literature on the four most well-known motivational concepts in this area: goal conflict, goal ambivalence, self discrepancy and self concordance. In order to integrate these four concepts, a reconceptualisation of these four concepts from a hierarchical perspective will be outlined. On the basis of this integrative literature review, the most important unanswered questions in this area will be highlighted, and these questions will provide the focus for the empirical chapters in this thesis. Finally, this chapter will provide a rationale for the methodological approaches taken in this thesis to addressing these unanswered questions, and the research aims and hypotheses will be presented.

1.2. Internal conflict

Conflict is broadly defined as “the opposition, in an individual, of incompatible wishes or needs of approximately equal strength; also, the distressing emotional state resulting from such opposition” (Oxford English Dictionary, 2011). Internal conflict is a perennial concern, and one that has long represented a central theme in the writings of philosophers, poets and novelists. For example, in Homer’s *Iliad*, a central theme is Achilles’ moral conflict or dilemma between his social and military obligation to his comrades and his integrity and personal desires (Zigler, 1994). Within psychology, internal conflict is an important theme within Psychoanalytical approaches, which emphasise the battle between opposing forces within the self in neurosis (e.g., Freud, 1915, 1923). In addition, conflict in a key

concept in Attachment Theory and its discussion of the tension between the desire to explore and the desire to seek safety (e.g., Bowlby, 1969). In addition, the Behaviourist approach has considered the effects of approach-avoidance conflicts (e.g., Miller, 1944). However, whilst numerous researchers agree that conflict is central to the study of psychopathology (e.g., Emmons, 1986; Grawe, 2003; Lauterbach, 1996; Mansell, 2005; Renner & Leibetseder, 2000; Shapiro, 1974), no comprehensive review of the literature pertaining to the effects of goal conflict exists, and it is not clear how the wide range of concepts relate to one another and to well-being. Thus, integrating and extending the existing literature on goal conflict was identified as the key aim of this thesis.

1.3. Literature review

In the existing literature on the relationship between internal conflict and well-being, four concepts have received considerable attention: goal conflict, goal ambivalence, self discrepancy and self concordance. These four concepts will be the focus of the literature review.

Goal conflict refers to instances when a person is trying to achieve two or more opposing or incompatible goals (e.g., Emmons & King, 1988). Ambivalence is conflict or indecision about whether to pursue a goal or approach-avoidance conflict (e.g., Sincoff, 1990). Self discrepancy is the discrepancy or difference between an individual's senses of self, for example, ideal and actual selves (e.g., Higgins, Bond, Klein & Strauman, 1986). Finally, self concordance is a broader concept, which refers to congruence or agreement between an individual's important needs and motivations and the goals they pursue in their daily life (e.g., Sheldon & Kasser, 1995). These four constructs have previously occupied distinct research domains, with independent theoretical bases, vocabulary, and approaches to assessment. Each

of these concepts has been previously studied with relation to well-being and psychological distress.

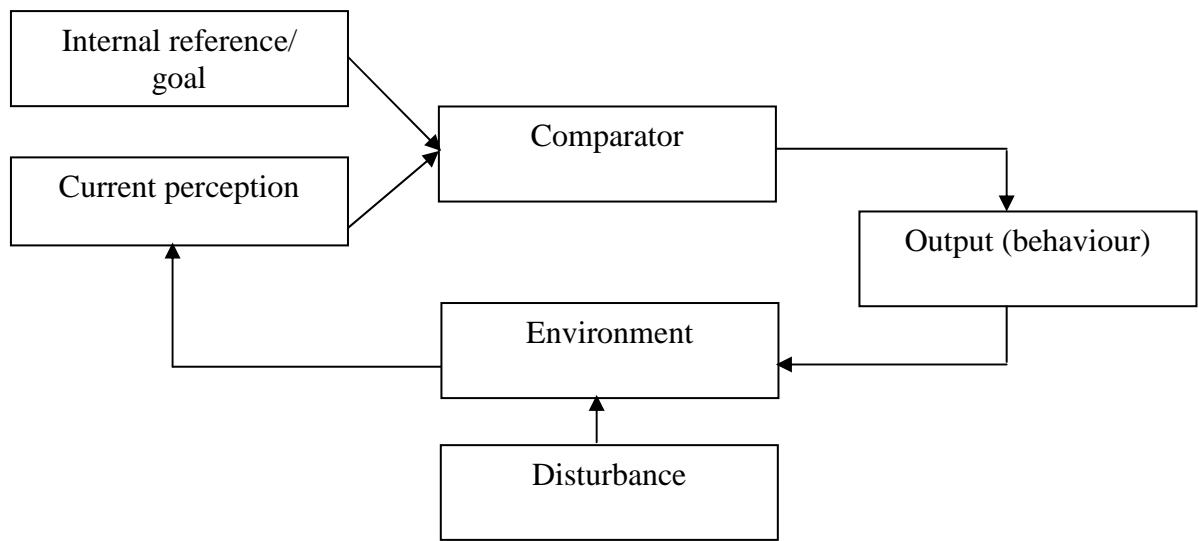
Goal conflict, ambivalence, self discrepancy and self concordance have been investigated in relation to numerous outcomes. This review focuses on the relationship between these four motivational processes and (a) psychological distress and the presence of clinical symptoms of disorder, (b) physical health, and (c) positive well-being such as quality of life and life satisfaction. The inclusion of the latter outcomes is consistent with recent calls for a Positive Clinical Psychology which places an equally weighted focus on positive and negative aspects of well-being in understanding and treating distress (Wood & Tarrier, 2010).

1.4. Control theory

Numerous researchers subscribe to a hierarchical understanding of goal pursuit and self-regulation (e.g., Emmons, 1999; Carver & Scheier, 1982; Watkins, 2011). The hierarchical perspective assumes that at the highest level, there are a small number of core, basic, human goals and needs such as food, safety, and acceptance from others, for example, which have a number of sub-goals that specify the means to attend these goals. Thus, goals can be said to be mentally represented in an organisational framework, which includes fundamental values and motivations at the more abstract, high levels, and more practical, concrete, goals at the low levels. Control theory suggests that individuals strive for personal goals via a process of negative feedback whereby perceptions of certain experiences or quantities are compared to internal goals for these experiences or quantities, and any discrepancies trigger action or behaviour to reduce this discrepancy or 'error' (Figure 1.1).

Figure 1.1.

A negative feedback loop



Within a goal hierarchy, abstract, high level goals set or define the necessary sub-goals, so that the concrete, low level goals or strivings an individual pursues help them to achieve their important high level goals (Powers, 1973). For example, a high level goal of ‘be a good person’ might dictate lower level goals of ‘do volunteer work’, ‘help others’ or ‘give to charity’, which would further specify even lower-level goals which specify how the individual should carry out these activities.

In previous research there has often been little or no consideration of the level of the goals or needs described by participants. This is problematic, as recent findings in the social and clinical psychology literatures highlight the importance of a hierarchical perspective. For example, Wallenius (2000) contrasted high level and low level goals and found that individuals who tended to list their current projects in more abstract and high level terms experienced more conflict and were more distressed. Watkins (2008), in a large-scale review, found that the negative impact of repetitive thought can depend on whether individuals’ awareness is focused on high or low level goals or concepts. It is argued that it is important to consider goal

conflict, ambivalence, self discrepancy, and self concordance from a hierarchical perspective. Failure in high level goals may have more impact on well-being (e.g., Carver & Scheier, 1990). Thus, the extent to which these four motivational concepts relate to high level or low level goals and needs might impact upon their relationship to well-being. With these considerations in mind, this chapter presents a reconceptualisation of goal conflict, ambivalence, self discrepancy, and self concordance, within a hierarchical model.

1.5. A hierarchical model

A model is hereby proposed within which four processes are important in determining psychological ill-being and well-being: Goal conflict, ambivalence, self discrepancy and self concordance.¹ An overview of the four concepts, including definition, assessment, and an example, is given in Table 1.1 overleaf.

Table 1.1.

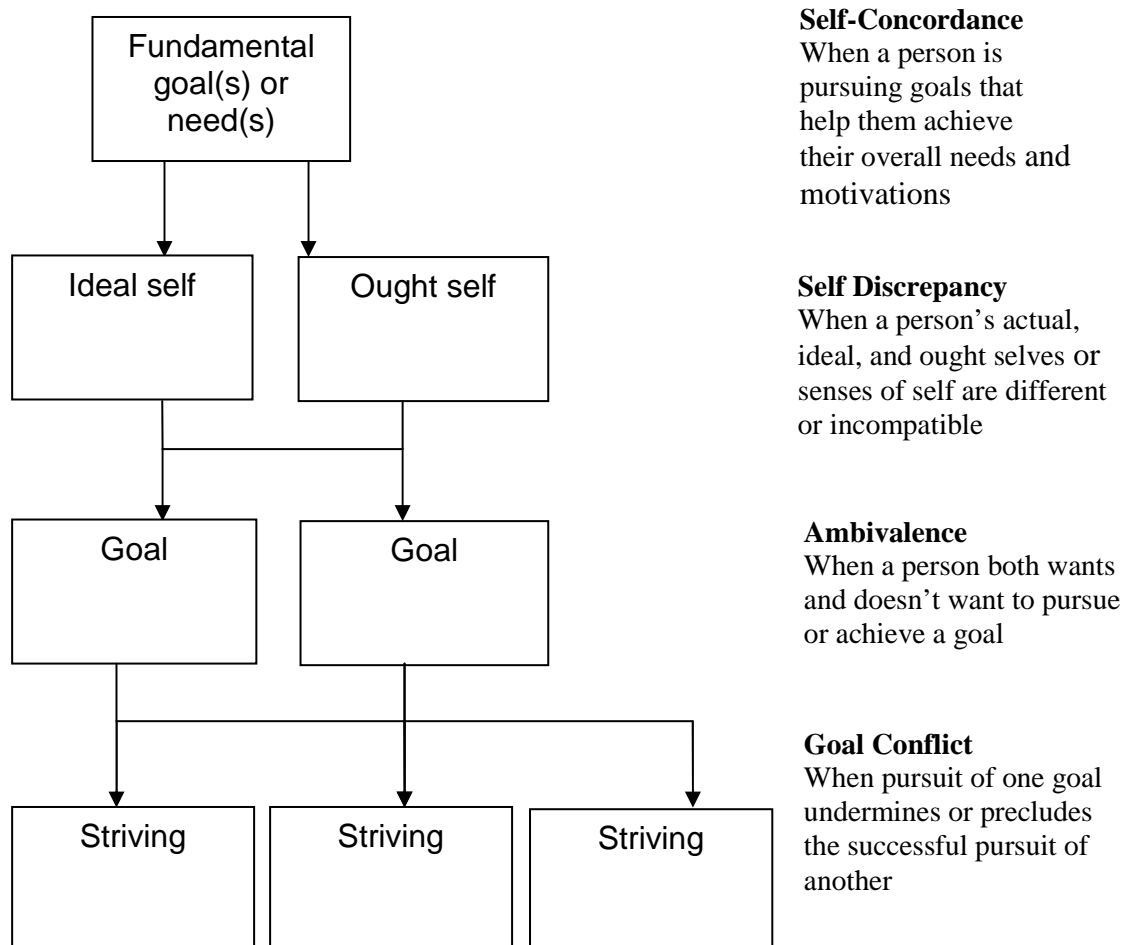
Overview of the four constructs within the Hierarchical Model of Goal Conflict

	Definition	Assessment	Example
Conflict between goals, plans or projects	When pursuit of one goal undermines the successful pursuit of another	Matrix methods, e.g., Strivings Instrumentality Matrix Computerised Intrapersonal Conflict Assessment (CICA)	“I want to work long hours to get ahead in my career, but I also want to spend lots of time with my family and friends.”
Ambivalence	When a person both wants and doesn’t want to pursue or achieve a goal	Item from the Strivings Assessment scale – “How happy would you be if you succeeded in this goal” Ambivalence over Emotional Expression Questionnaire	“I am trying to give up alcohol, but I’m not sure I’ll be happy if I succeed. Part of me wants to stop drinking alcohol completely, but part of me doesn’t want to.”
Self discrepancy	When a person’s actual, ideal, and ought senses of self are different or incompatible	Self Discrepancies Questionnaire Incongruence Questionnaire CICA	“I’d ideally be a brave, spontaneous and impulsive person, but I ought to be a practical, sensible and reliable person.”
Self-concordance	When a person is pursuing goals that help them achieve their overall needs and motivations	Individuals list their goals and rate them on various features, e.g., instrumentality to life goals, autonomous motivation	“Having good relationships is what is most important to me, so my goal is to spend lots of quality time with my family and friends.”

As discussed, the hierarchical model presented in this chapter draws on a number of central premises of control theory (Carver & Scheier, 1981, 1982, Powers, Clark & McFarland, 1960; Powers, 1973). The model proposes, in line with Watkins (2011) and Carver and Scheier (1982), that effective self-regulation requires the higher, abstract levels to be functionally connected with the lower, concrete levels, so that subordinate concrete goals serve to achieve more abstract, superordinate goals. It is argued that the four concepts can be conceptualised within a goal hierarchy (see Figure 1.2).

Figure 1.2

The hierarchical multi-componential model of goal conflict



1.6. Hierarchical reconceptualisation of the four concepts

At low levels in a goal hierarchy exist what have been termed ‘personal strivings’ by Emmons and others (e.g., Emmons, 1986); these are concrete, ‘doing’ goals. These represent what an individual is trying to do, or not do, in their everyday behaviour, for example, “spend more time with my partner”. Conflict at this level is what has traditionally been thought of as goal conflict and often arises when two goals at the same level compete for the same resource, for example, time or money (e.g., Segerstrom & Solberg Nes, 2006). An example of a conflicting pair of strivings at this level could be “spend more time with my partner” and “do more overtime at work to get a promotion”.

Ambivalence about pursuing low level goals is conceptualised as conflict between the goals or motives at the level above (Kelly, Mansell & Wood, 2011). At this mid level are goals or principles that represent ‘being goals’, for example, to “be a good parent”, or “be successful in my career”. Feelings of ambivalence about pursuing low-level goals are thought to arise because these mid-level goals are in conflict. This conflict leads the individual to feel torn in opposing directions, to pursue the goal and to not pursue the goal, and the conflict may be unconscious. Kelly et al. (2011) give the example of a woman who feels ambivalent about trying for a baby because the higher-level goals of ‘please my parents’ and ‘be independent’ are in opposition. Feelings of ambivalence about pursuing goals may also arise due to indecision or the low valuing of goals. However, if an individual does not value a goal, or feels undecided about whether to pursue it and yet is pursuing the goal, then this would indicate ambivalent goal conflict, either between this goal and other goals, or conflict over whether or not to pursue the goal.

At the highest levels within a goal hierarchy are self-definitional, abstract, fundamental goals or sets of goals, which relate to aspects of individuals' ideal and ought selves and represent what they want to be or avoid being, for example, "Be a good person". Researchers have previously suggested that individuals' higher-level goals approximate their possible selves (e.g., Hyland, 1988; Read & Miller, 1989). Self discrepancy is conceptualised as conflict between these high level goals, or a state when the self-definitional goals at this level are not met and so there is a discrepancy between the goal and the individual's perception of their actual self.

Effective self-regulation occurs when low level goals are well defined by high level, fundamental goals and needs. The final concept within the model, self concordance, is conceptualised as representing this quality of a goal striving hierarchy. Thus, self concordance is conceptualised as a state when an individual's goals are unconflicted and fulfil their intrinsic needs and fundamental values. Lower level goals should be consistent with higher level goals so that the goals an individual is striving for on a daily basis help to bring about the things they really want and need in life. Concordance may be the most important of the four concepts for determining individuals' well-being as it is a superordinate concept that represents a lack of conflict throughout the hierarchy. Consistently, Sheldon and Kasser (1995) have argued that concordant goal striving is a fundamental aspect of personality integration. Whilst the intrinsic-extrinsic distinction is an important aspect of self concordance, the present model does not propose that the pursuit of extrinsically motivated goals necessarily equates to conflict. However, conflict may arise between extrinsic goals (e.g., others' expectations) and intrinsic goals (one's own personal goals), when the person internalises the goals or expectations of others, for example if acceptance by others is important.

The processes at different levels of the hierarchy may interact to predict well-being. For example, goal conflict may be more or less distressing depending on how ambivalent individuals are about pursuing their goals (Kelly et al., 2011).

Alternatively, the four processes might correlate with or cause one another; for example, Emmons and King (1988) have argued that conflict can engender feelings of ambivalence. In addition, it is hypothesised that the processes at higher levels in the hierarchical model might be more strongly related to well-being. High level goals are more fundamental and self-definitional (Carver & Scheier, 1982; Powers, 1973), and goal conflict at higher levels is thought to be more detrimental to well-being (Emmons, 1999; Mansell, 2005; Powers, 1973). In addition, high level goals are less likely to become conscious in the course of everyday behaviour (Carver & Scheier, 1982; Emmons, 1999), and control theory suggests that awareness of the goals in conflict is necessary for conflict to be resolved, thus higher level conflict might be more chronic or difficult to resolve and thus be more distressing.

This model represented the first integration of these four concepts. In summation, the hierarchical model proposes that the presence of conflict within a goal hierarchy has negative consequences for psychological well-being, whilst the absence of concordance throughout the goal hierarchy promotes successful self-regulation and leads to positive outcomes.

The hierarchical model proposes that:

1. Distress or low well-being may result when individuals' low level goals are in conflict, that is, they are pursuing goals or projects that conflict with one another and demand the same, limited resources;

2. Distress or low well-being is likely to result when individuals' mid- to high level goals are in conflict, such that they have mixed motivations or ambivalent feelings relating to the goals that they are currently pursuing;
3. Distress or low well-being is likely to result when individuals have different or conflicting senses of their actual, ideal, and ought selves, and thus, their high level, self-definitional goals are either unmet or in conflict;
4. Psychological well-being arises when the goals that an individual is pursuing are un-conflicted and concordant with, or help to bring about, their fundamental goals and needs. That is to say, the goals individuals pursue on a day-to-day basis should be correctly specified by their higher-level goals.

It is proposed that distress arises when conflict within the hierarchy persists and is not resolved or 'reorganised'. This distress may manifest as clinically-significant psychological symptoms or low well-being.

1.7. The reorganisation of conflict

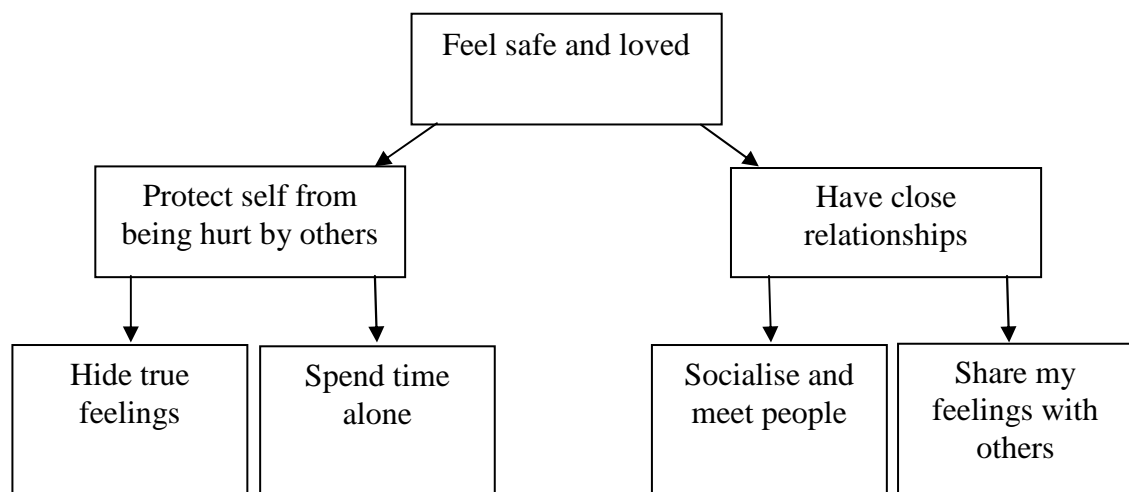
Control theory suggests that in order for individuals to be able to resolve internal conflicts, a process termed 'reorganisation' must occur (Powers, 1973, 1998). According to Control Theory, conflict is when two or more goals specify different standards for the same quantity (Powers, 1973), and so individuals oscillate between the two goals, with neither being maintained, resulting in discrepancy or mismatch between individuals' internal goals and their current perceptions.

Reorganisation is a trial-and-error learning process, which aims to reduce this error or mismatch. For example, reorganisation might involve reprioritising a goal with respect to other important goals, or changing the amount of importance one places on a goal or how much effort is put into striving towards a goal. The process of reorganisation is said to occur naturally and continuously, but reorganisation requires

awareness that a certain goal is not being met or is in conflict with another goal. It is suggested therefore that for conflict to be resolved in the long-term, individuals' awareness must be directed towards the higher level, long-term, personalised goals in the hierarchy that are setting incompatible sub-goals, so that changes can be made at these higher-levels (Powers, 1998). For example, an individual with the conflicting goals of 'hiding his feelings from others' and 'being open and honest with others' might need to consider the potentially opposing higher-level goals of 'have close relationships' and 'protect self from getting hurt' in order to resolve this conflict in the long-term (Figure 1.3). Once he is aware of these higher level goals, he can then choose to prioritise being open with others in order to maintain close relationships, and consider other ways of achieving the goal of protecting himself from getting hurt that do not involve hiding his feelings.

Figure 1.3.

Hypothetical goal hierarchy based on a participant in Study 8



1.8. Methods of assessment

1.8.1. Conflict between goals, plans and projects. Conflict between goals, plans or projects is generally understood as situations when pursuit of or progress towards one goal precludes, or undermines, pursuit of or progress towards another (Segerstrom & Solberg Nes, 2006). Many researchers have considered goals, plans and projects to be equivalent constructs (e.g., Michalak et al., 2004). It has been argued that goals offer an ideal avenue for exploring processes of self-regulation (e.g., Emmons, 1986), and conflict between goals is an interesting focus for research because it is prevalent; a certain amount of inter-goal interference is to be expected when people pursue multiple goals (Karoly, 1999).

Goal conflict is generally measured using either matrix methods or Lauterbach's computerised conflict assessment measure. Matrix methods (e.g., Strivings Instrumentality Matrix; Emmons & King, 1988) explicitly quantify the presence and extent of conflict between individuals' self-generated goals; participants consider the effect of each goal on each other goal and record these relationships in a matrix. Researchers have adapted this method, for example using separate matrices for resource and inherent conflict (Segerstrom & Solberg Nes, 2006), or using unipolar scales for interference and facilitation (Riediger & Freund, 2004).

In addition, one aspect of Lauterbach's Computerised Intrapersonal Conflict Assessment (CICA, Lauterbach, 1996), the 'general cognitive inconsistency' or 'overall conflict' aspect, assesses conflict between goals, plans or projects. The CICA (Lauterbach, 1996; Lauterbach & Newman, 1999) defines conflict as inconsistency between two concepts, for example, leisure time and work success, and assesses conflict between goals, values and attitudes by assessing an individual's

attitudes toward a number of concepts and their beliefs about the relationships between these concepts. Participants are asked whether a concept is positively or negatively valued, e.g., “is it a good thing or a bad thing to work”; their attitudes toward personal goals are assessed; “is the goal ‘success at work’ a goal you strive for or you avoid”; and they are asked to estimate the relationship between the concepts. The extent of cognitive inconsistency is assessed using triads, which are structures of three cognitive concepts or goals and their subjective relationships. The CICA assumes that a triad is balanced if no or two relationships are negative, but imbalanced if one or three relations are negative. All possible triads, each comprising three items, are constructed post hoc by the computer and their balance is calculated. The CICA makes it possible to compute several conflict indices, including global conflict (goal conflict), which is the overall percentage of triads that are imbalanced, and inconsistencies between attitudes and reality (discrepancy) (Michalak et al., 2004).

Finally, following G. A. Kelly’s (1955) personal construct theory, the repertory grid technique (e.g., GRIDCOR, Feixas & Cornejo, 2002), was developed. The RGT is a method which assesses three types of conflict: implicative dilemmas (e.g., Hinkle, 1965), which refer to instances when a desired change in one domain would lead to an undesired change in another; dilemmatic constructs (e.g., Feixas & Saul, 2004), which refer to conflict situations where neither option of action seems desirable; and triadic conflicts (e.g., Slade & Sheehan, 1979), which is when triads of three concepts are unbalanced, as described above.

1.8.2. Goal ambivalence. Ambivalence is a term coined by Bleuler (1911) to refer to contradictory feelings of love and hate directed simultaneously toward the same thing. In contemporary literature, ambivalence is conceptualised as approach-

avoidance conflict (Sincoff, 1990), or within-striving conflict (Emmons & King, 1988), which exists when an individual is consciously pursuing a certain goal, but believes they would not be altogether happy if they succeeded in it. Ambivalence is a major concept in both traditional and contemporary psychoanalysis (Sincoff, 1990) and a number of therapeutic approaches explicitly target ambivalence (e.g., Miller & Rollnick, 1991; Perls, 1969; Strupp & Binder, 1984), highlighting the relevance of this type of conflict for psychopathology. Ambivalence about emotional expression has been argued to be particularly important for psychopathology (King & Emmons, 1990).

Only goal-related ambivalence, as a form of goal conflict, is of interest to the present thesis; research considering attitudinal or decisional ambivalence is not considered in this review. Ambivalence is generally assessed using a one-item measure from the Strivings Assessment Scale (SAS; Emmons, 1986); which asks with reference to a specific goal how happy the individual would be if they succeeded in it, assuming that a certain level of unhappiness about the prospect of achieving a goal represents ambivalence about pursuing the goal.² Individuals have specific goals for their emotional states and the expression of these emotional states and can often feel ambivalent or in conflict about these goals. Thus, ambivalence over emotional expression is included in the present review as a form of goal conflict. Ambivalence about expressing emotion is assessed using the Ambivalence over Emotional Expression Questionnaire (AEQ; King & Emmons, 1990). The AEQ is a questionnaire measure of ambivalence, or opposing feelings, about expressing different emotions, including statements such as “I worry that if I express negative emotions such as fear and anger, other people will not approve of me”. The AEQ was developed following content analysis of the types of strivings that individuals

tended to feel more ambivalent about, which revealed a theme of conflict about expressing emotion (Emmons & King, 1988), leading King and Emmons (1990) to develop a specific measure to assess ambivalence over expressing emotion (Emmons, 1999).

1.8.3. Self discrepancy. Self discrepancy has been previously referred to as conflict or inconsistency between different aspects or perceptions of the self (e.g., Higgins et al., 1986). Over the years many researchers have differentiated different facets of the self or self-images. For example, James (1890) distinguished between the "spiritual" self, one's moral sensibility and conscience, and the "social" self, the self worthy of being approved by the person perceived to be the highest social judge, and Rogers (1961) distinguished between what others believe a person should or ought to be (i.e., the normative standard) and a person's own belief about what he or she would "ideally" like to be (Higgins, 1987). Similar concepts have been addressed in contemporary research about the concept of authenticity (e.g., Wood, Linley, Maltby, Baliousis, & Joseph, 2008). Authenticity is defined as consistency between a person's experience, symbolised awareness, and outward behaviour and communication, and a person's level of authenticity has been shown to relate to their psychological well-being and self-esteem (Wood et al., 2008).

Higgins (1987) described a number of different, internal dimensions of the self that create internal conflict. The three basic domains of the self are: (a) the *actual* self, a representation of the attributes that you or another believe you possess; (b) the *ideal* self, a representation of the attributes that you would ideally possess (i.e., a representation of someone's hopes, aspirations, or wishes for you); and (c) the *ought* self, a representation of the attributes that someone (yourself or another)

believes you should or ought to possess (including your sense of duty, obligations, or responsibilities) (Higgins, 1987).

Higgins (1987) has hypothesised different types of self-discrepancies might relate to different types of psychological discomfort. For example, discrepancies between one's sense of their 'actual' self and their representation of their ideal self might indicate that an individual has not achieved important goals, which could lead to dejection-related emotions such as disappointment, dissatisfaction, or sadness. In contrast, discrepancies between the 'actual' self-state and the 'ought' self-state might relate to agitation-related emotions (e.g., fear, threat, restlessness) (Higgins, 1987). An example of a common self discrepancy is the conflict some women feel between their own goals to be professionally successful and others' views that they ought to prioritise being good housewives and mothers (Higgins, 1987).

Self discrepancies are generally assessed using the Self Discrepancies Questionnaire (SDQ; Higgins, Klein & Strauman, 1985), which involves asking participants to list attributes of their actual, ideal, and ought selves, and quantifying the discrepancies by determining matches and mismatches, according to whether the words were the same or synonyms, or antonyms. Other studies assess ideal-actual discrepancies using the Incongruence questionnaire (INK German version: Grosse-Holtforth & Grawe, 2003), which assesses the extent of discrepancy between individuals' goals and their current perceptions of reality. The CICA, as described previously, can also be used to assess discrepancies; the 'inconsistencies between attitudes and reality' factor is equivalent to actual-ideal self discrepancy.

1.8.4. Self concordance. Self concordance has been conceptualised as a state when an individual's goals fulfil fundamental, intrinsic needs (Sheldon & Kasser, 1995). Self determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000)

highlights the importance of one's goals being autonomous and volitional; that is, an individual's goals should be self-determined, rather than dictated or required by external influences.

Self concordance, or concordance between goals and one's intrinsic motivations, can be assessed by asking individuals to list goals, or consider presented goals and rate them on dimensions which assess different motivations for pursuing these goals (e.g., Sheldon & Kasser, 1995). Intrinsic goals are said to include intimacy, "having many close and caring relationships with others"; community, "helping to make the world a better place"; and growth, "being fulfilled and having a very meaningful life"; whilst extrinsic goals include financial success, "getting a job that pays very well and having a lot of nice possessions"; status, "being known and/or admired by many people"; and image, "looking good and appearing attractive to others" (Sheldon & Kasser, 2001). Autonomous motivations for pursuing goals include 'identified' ("because you really identify with the goal" and intrinsic ("because of the enjoyment or stimulation that this goal would provide you"); and controlled motivations include external ("because of the external rewards such as money, grades, or status that the goal may produce") and introjected ("because you would feel ashamed, guilty, or anxious if you did not have this goal").

1.9. Empirical evidence for the effects of goal conflict, ambivalence, self discrepancy and self concordance

1.9.1. Literature search. Keyword searches were performed using the Psych Info (1800 - present) database for: 'goal conflict', 'striving conflict', 'plan conflict', 'project conflict', 'intra-individual conflict', 'intra-personal conflict', 'personal conflict', 'motivational conflict', 'internal conflict', 'ambivalence', 'goal

incongruence/t', 'goal discrepancy/cies/t', 'goal congruence/t', 'self discrepancy/ies/t', and 'self concordance/t'.

1.9.2. Inclusion criteria. Articles were included which were written in English and which reported on an empirical study or studies into the consequences of one or more of the four selected concepts for psychological or physical health, or for subjective well-being.³ Further relevant articles were then selected from the reference lists of each of the articles that met the inclusion criteria. For any author who appeared more than once in the list of resulting articles a further search was performed using the author's name and relevant articles were included.

The studies reviewed relating to conflict between goals, plans or projects, are summarised in Table 1.2. The studies reviewed relating to ambivalence and ambivalence over emotional expression conflict between goals, plans or projects, are summarised in Table 1.3. The studies reviewed relating to self discrepancies are summarised in Table 1.4. The studies reviewed relating to self-concordance and successful goal pursuit are summarised in Table 1.5.

Table 1.2.

Conflict between goals, plans and projects

Authors	Sample; design	N	Measure	Relationships assessed	Result
Palys & Little, 1983	Students; cross-sectional	178	Matrix: Personal projects cross-impact matrix	1 item present life satisfaction measure	Individuals low in life satisfaction had more conflictful project matrices than those high in life satisfaction.
Emmons, 1986	Students; prospective (experience sampling diary 4 times daily for 3 weeks)	40	Matrix: Strivings Instrumentality Matrix (SIM: conflict between self-listed goals)	Positive affect (4 adjectives), negative affect (5 adjectives), SWLS	Conflict was positively associated with negative affect, and negatively associated with positive affect and life satisfaction.
Emmons & King, 1988	Students; cross-sectional and prospective (1 year follow up)	40	Matrix: SIM	PAS, NAS, DPQ (well being), EPQ (neuroticism), somatic symptoms, anxiety, depression	Positive associations were found between conflict and negative affect, somatic symptoms, anxiety, depression, and rumination, and negative associations between conflict and goal directed activity.
	Students; prospective (twice daily mood reports for 21 days, 1 year follow up)	48	Matrix: SIM	Daily mood and somatic symptom reports, physical illnesses, physician visits for 1 year	Positive associations were found between conflict and somatic symptoms and health centre visits in the 1 year follow up period.

Sheldon & Kasser, 1995	Students; cross-sectional	161	Matrix: SIM	Self Actualisation Scale, Vitality, PANAS, SES	Conflict was not associated with any of the outcome measures.
King, Richards, & Stemmerich, 1998	Students; cross-sectional	80	Matrix: SIM	SWLS, SES, BDI	Conflict was negatively correlated with goal importance and progress; there were no correlations between conflict and the subjective well being measures.
Wallenius, 2000	Students; cross-sectional	167	Matrix: Personal projects cross-impact matrix	1 item present life satisfaction measure	No relationships were found between conflict and life satisfaction.
Kehr, 2003	Adult managers in management training; prospective (3 assessments over 5 months)	99	Matrix: SIM composite - new and existing goals	Goal attainment, 16 item positive and negative affect measure (subjective well being)	Goal conflict over time was associated with inhibited attainment of newly set goals, but not with subjective well being; time 2 conflict was related to negative affect; an increase in conflict was related to decrease in positive affect whereas stable conflict was related to increase in positive affect.
Riediger & Freund, 2004	Adults; cross-sectional and prospective (study 2: exercise data for 5 months; study 3: 3 x 3-day diary periods)	Study 1: 111 Study 2: 145 Study 3: 81	Matrix: Intergoal Relations Questionnaire (IRQ -interference and facilitation)	Multidimensional Affect Rating Scale, Life Evaluation Scale, Pressure-to-Change Scale, goal pursuit (4 items)	Goal interference (conflict) was negatively associated with well being; whereas goal facilitation was positively associated with involvement in goal pursuit.

Segerstrom & Solberg Nes, 2007	Students; cross-sectional and prospective (study 2: 6 assessments over a 3-month semester)	Study 1: 100 Study 2: 77	Matrix: Resource v inherent conflict - SIM completed by researcher	Goal pursuit, BDI, rumination scale, symptom checklist	Study 1: Inherent conflict was inversely related to goal importance and anticipated sorrow on nonattainment. Resource conflict was positively related to measures of goal value. Study 2: No associations between either type of conflict and psychological health.
Freitas, Clark, Kim & Levy, 2009	Students; cross-sectional	91	Matrix: SIM	BIF task (forced choice task –participants choose to reframe events in high-level or low-level terms), PANAS, anticipated happiness on goal success, goal importance	Lower levels of conflict were related to higher anticipated happiness, greater goal importance, more positive affect. In reframing task, participants who tended to view things in high-level, abstract terms, had more positive affect if there was less conflict between their goals; the amount of conflict mediated the effect of level of construal on affect.
Romero, Villar, Luengo & Gomez-Fraguela, 2009	Adults ; cross-sectional	405	Matrix : SIM	SAS ambivalence, self-concordance score, PANAS, SWLS, PIL, NEO-PI	SIM conflict not related to well being measures or NEO-PI personality trait domains.

Kelly, Mansell & Wood, 2011	Students ; cross-sectional	120	Matrix : SIM	DASS-21	Conflict interacted with ambivalence to predict depression; low conflict and high ambivalence related to elevated depression symptoms.
Perring, Oatley & Smith, 1988	College and University students, adult non-students; cross-sectional	224	Interviews and questionnaires measuring the degree of perceived conflict in daily activities	GHQ	Positive relationships were found between conflict and symptoms in younger and student samples.
Pomaki et al., 2004	health care employees; cross-sectional	3,088	Most important work goal and 4 facets of associated conflict	Job satisfaction, exhaustion	Conflict was related to poor job satisfaction and greater exhaustion.
Riediger & Freund, 2008	Adults of different ages; prospective (3 x 3-day diary periods separated by 6 days)	Study 1: 81 Study 2: 63	Participants recorded each day's activities and indicated 'want' and 'should' activities where they would have liked to do or should have done something else instead	Positive and negative affect (MARS)	Motivational conflict was related to lower emotional well being. An age-related decrease in conflict partially accounted for an age-related increase in well-being.
Karoly, Okun, Ruelhman & Pugliese, 2008	Adults with chronic lower back pain; prospective (3-month follow up)	100	Listed 4 most important goals and rated how much they conflict	Goal self efficacy for most important goal; pain severity, pain induced fear, physical disability extent at 3 months, depression at 3 months	Conflict (along with self efficacy and pain severity) predicted pain induced fear.

Feixas, Saul & Avila-Espada, 2009	Clinical (284)and control (322) participants; cross-sectional	606	Repertory Grid Technique (assesses implicative dilemmas, dilemmatic constructs and triadic conflict)	SCL	Implicative dilemmas (when an individual perceives that a desired change in one concept will lead to an undesired change in another concept) were related to symptom severity and discriminated clinical from control participants.
Lauterbach, 1975	Neurotic and Depressed patients; prospective (several months)	5	CICA: Early pen and paper version assessing conflict in patients' personal problems, beliefs about self, and attitudes	Profile of Mood States	Overall conflict correlated with mood (depression, fatigue and tension). Conflict in beliefs about the self also related to mood, but conflict between attitudes did not.
Lauterbach, 1990	Art students and soldiers; cross-sectional	147	CICA: Overall conflict	NA	Conflict was associated with negative affect.
Lauterbach, 1996	Hospitalised alcohol patients (44) and long term abstinent alcoholics (51); cross-sectional	95	CICA: Pen and paper version assessing conflict between 10 listed concepts	Intolerance of Ambiguity (AIT), KASSL symptom checklist, SCL	The hospitalised patients had higher levels of conflict, conflict was correlated with symptoms, and this relationship was stronger for individuals who were intolerant of ambiguity.
Renner & Leibetseder, 2000	Psychotherapy patients and controls; cross-sectional	139	CICA: Overall conflict	SCL	Positive associations were found between overall conflict and all symptom measures in the combined sample.

Hoyer, Fecht, Lauterbach & Schneider, 2001	Alcoholic inpatients; prospective (4 assessments over 13-14 weeks)	45 received psychodynamic therapy, 49 received CBT	CICA: Overall conflict	GSI, mood, SWLS	Conflict decreased in all therapy, with the fastest decrease in CBT. Conflict was associated with mood, symptoms and satisfaction with life.
Stangier, Ukrow, Schermelleh-Engel, Grabe & Lauterbach, 2007	Depressed patients and controls; cross-sectional	77	CICA: Overall conflict	BDI, DAS, IIP, PSI	Patients with depressive disorders showed significantly higher scores on all three types of conflict than controls. Significant correlations were found between conflict and interpersonal problems, and problem solving difficulties. Group differences in intrapersonal conflicts were partially mediated by interpersonal problems.

Table 1.3.

Ambivalence and ambivalence about emotional expression

Authors	Sample; design	N	Measure	Relationships assessed	Result
Emmons, 1986	Students; prospective (experience sampling diary 4 times daily for 3 weeks)	40	Strivings Assessment Scale Ambivalence (SAS)	Negative affect (5 adjectives)	Ambivalence was positively associated with negative affect.
Emmons & King, 1988; study 1	Students; cross-sectional and prospective (1 year follow up)	40	SAS	PAS, NAS, DPQ, EPQ, HSC, rumination, goal directed activity	Ambivalence was associated with negative affect, neuroticism, somatisation, anxiety, and depression; ambivalence predicted more rumination and less goal directed activity.
Emmons & King, 1988; study 2	Students; prospective (twice daily mood reports for 21 days, 1 year follow up)	48	SAS	Daily mood and somatic symptom reports for 21 days; physical illnesses, physician visits for 1 year	Ambivalence was negatively associated with positive affect, and positively associated with anxiety and depression, but not associated with measures of physical health.

King, Richards & Stemmerich, 1998	Students; cross-sectional	80	SAS	SWLS, SES, BDI	Ambivalence was negatively associated with life satisfaction, and positively associated with depression.
Romero, Villar, Luengo & Gomez-Fraguela, 2009	Adults; cross-sectional	405	SAS	Self-concordance score, PANAS, SWLS, PIL, NEO-PI	Ambivalence loaded onto the Externality factor when different strivings aspects were subjected to principal components analysis. This factor and ambivalence independently were unrelated to well-being measures.
Kelly, Mansell & Wood, 2011	Students; cross-sectional	120	SAS	DASS-21	Ambivalence was associated with depression symptoms when conflict was low.
King & Emmons, 1990	Students; prospective (filled in diaries over 21 days)	48	Ambivalence over Emotional Expression Questionnaire (AEQ)	PA, NA, MPQ, SWLS, SES, BABS, BDI, EPQ, BSI, PILL (physical symptoms), physician visits, physical illnesses	Ambivalence was negatively associated with questionnaire measures of well-being, but not daily symptom reports.
King & Emmons, 1991	Married couples; prospective (3 week follow up)	100	AEQ	PA, NA, SWLS, BSI, physician visits, PILL, somatisation	Ambivalence was negatively associated with positive affect; and positively associated with negative affect, compulsivity, depression, anxiety, hostility, phobic anxiety, paranoia, psychosis, and physical symptoms.

Mongrain & Zuroff, 1994	Students; prospective (4-8 week follow up)	150	AEQ	CES-D, dependency and self-criticism, AIM	Dependency and self criticism predicted higher ambivalence and more depressive symptoms.
Katz & Cambell, 1994	Students; prospective (4 month follow up, 2 week diary)	66	AEQ	BDI, NEO-FFI, physical illnesses and physician visits	Ambivalence was positively associated with depression, neuroticism and physical illnesses at baseline; and depression, negative affect, physical symptoms and stress at two week follow up.
Emmons & Colby, 1995	Students; cross-sectional	105	AEQ	SWLS, social support, BSI (anxiety, depression), positive and negative affect	Ambivalence was negatively associated with life satisfaction, social support and positive affect, and positively associated with negative affect.
Porter, Keefe, Lipkus & Hurwitz, 2005	Gastro intestinal cancer patients and spouses; cross-sectional	78	AEQ	PCS, PBS, DSSI, visual analogue scale of pain symptoms, SF-36	Patients high in ambivalence engaged in more catastrophising, experienced more pain symptoms, and had lower emotional well being, especially if their spouses were also highly ambivalent.
Tucker, Winkelman, Katz & Bermas, 2006	Rheumatoid arthritis patients and spouses; cross-sectional	138	AEQ	HSC, SWLS, WCQ	Ambivalence and well being were related, and patients' ambivalence was more strongly related to well being if their spouse was also highly ambivalent.

Table 1.4.

Goal-reality discrepancies and self-discrepancies

Authors	Sample; design	N	Measure	Relationships assessed	Result
Higgins, Klein & Strauman, 1985	Students; cross-sectional	52	Selves Questionnaire assessing self discrepancies (actual-ideal and actual-ought) (SDQ)	BDI, HSCL	Actual-ideal discrepancy related to dejection and depression – related emotions and symptoms, whilst actual-ought discrepancy related to agitation related emotions and symptoms.
Higgins, Bond, Klein and Strauman, 1986	Students; cross-sectional	93	SDQ	Dejection (sadness), agitation	Study 1: In a writing task, subjects with a predominant actual-ideal discrepancy felt more dejected (e.g., sad) in the negative event condition, whereas subjects with a predominant actual-ought discrepancy felt more agitated (e.g., afraid). Study 2: For high discrepancy subjects, ‘ideal self’ priming increased their dejection, ought priming increased agitation.
Strauman & Higgins, 1988	Students; prospective (Study 1: 2 month follow up, Study 2: 1 month follow up)	Study 1: 72 Study 2: 163	SDQ	Study 1: BDI, Depressive Experiences Questionnaire, HSCL, Emotions Questionnaire	Study 1: Actual-ideal discrepancies were uniquely related to dejection, anger, and frustration at self at follow up, whilst actual-ought discrepancies were uniquely related to agitation, anger and resentment.

				Study 2 : Social Avoidance and Distress Scale, Fear of Negative Evaluations Scale, BDI, SCL-90	Study 2: Using structural equation modelling, it was found that actual-ought discrepancies were more strongly related to social anxiety, whilst actual-ideal discrepancies related to depression.
Van Hook & Higgins, 1988	Students; cross sectional and prospective (study 2: 6-8 week follow up)	Study 1: 28 Study 2: 30	SDQ	Multiple Affect Adjectives Checklist	Subjects with discrepant self-guides experienced emotional-motivational problems predicted to be related to chronic approach-avoidance conflict (feeling muddled, indecisive, distractible, unsure of self or goals, rebellious, confused about identity) more frequently than non-discrepant subjects.
Strauman, 1989	Clinically depressed (10), socially phobic (12) and control (15) participants; cross-sectional	37	SDQ	DSM-III used to separate groups, HRSD used to check groups	Depressed participants had the greatest actual-ideal self discrepancies, and socially phobic participants had the greatest actual-ought self discrepancies. Self-discrepancy priming induced symptoms of dejection and agitation, especially in depressed and anxious participants, respectively.

Strauman, Vookles, Berenstein et al., 1991	Students; cross-sectional	Study 1: 128 Study 2: 91	SDQ	BSQ, EAT, BINGE, UPP	Study 1: Actual-ideal discrepancies related to body shape dissatisfaction independent of body mass and appearance related self beliefs; actual-ought discrepancy discriminantly related to anorexic attitudes and behaviours. Study 2: Bulimic behaviours associated with unfulfilled positive potential (an actual-ideal discrepancy) anorexic symptoms related to actual-ought discrepancies.
Scott & O'Hara, 1993	Depressed (18), anxious (12), anxious and depressed (10) and control (40) students; cross-sectional	80	SDQ	Compared groups identified using DSM-III criteria, SADS and DIS	Depressed individuals had more actual-ideal discrepancies whilst anxious participants had more actual-ought discrepancies.
Strauman, Lemieux & Coe, 1993	Anxious, dysphoric and control subjects; cross sectional	38	SDQ	BDI, STAI	Activating discrepancies induced negative states; dysphoric individuals had greater actual-ideal discrepancies, anxious individuals had greater actual-ought discrepancies.

Fairbrother & Morretti, 1998	Clinically depressed (28), remitted depressed (20) and control (20) participants; cross-sectional	68	SDQ	Sociotropy and autonomy	Actual ideal discrepancies were greatest in depressed participants, followed by remitted depressed participants, and lowest in the control group. Discrepancies correlated with both sociotropy (dependence on others) and autonomy (self-criticism and independence). All were correlated with depression symptom severity.
Pierce, Strauman & Lowe Vandell, 1999	Mothers between 3 and 12 months postpartum; prospective (2 week follow up)	100	SDQ	CES-D, SCL	Actual-ideal discrepancy was positively associated with dejection at 2 week follow up. Negative life events were more strongly associated with dejection for mothers with an AI discrepancy. AI discrepancy was more strongly associated with dejection when social support was lower. Discrepancies did not predict anxiety.
Carver, Lawrence & Scheier, 1999	Students; cross-sectional	85	SDQ (plus feared self discrepancy: actual self vs. self participants worry about being or try to avoid)	Affect Balance Scale	Both actual-ideal and actual-ought discrepancies correlated with anxiety and depression symptoms. Actual-feared discrepancies inversely correlated with symptoms of anxiety and guilt. Actual-ought discrepancy predicted anxiety when there was a greater actual-feared discrepancy.

Strauman, Kolden, Stromquist et al., 2001	Psychotherapy out-patients; prospective (3-4 month end of therapy follow up)	Study 1: 28 (receiving group CBT) Study 2: 44 (receiving CBT, IPT or medication)	SDQ	BDI, HRSD	Psychotherapy (IPT), but not CBT, was associated with a decrease in self-discrepancies; overall discrepant participants showed less improvement even when controlling for initial symptom severity.
Kinderman, Prince, Waller & Peters, 2003	Individuals experiencing persecutory delusions, a psychiatric control group and a non-clinical control group; cross-sectional	37	SDQ	Emotional Stroop Task – modified attention bias towards threat	Before task groups did not differ in self-discrepancies, but following the task the delusion group reduced in actual-ideal discrepancy and increased in self actual: other actual discrepancy, relative to the other groups.
Veale, Kinderman, Riley & Lambrou, 2003	Individuals with Body Dysmorphic Disorder (BDD), BDD preoccupied with weight/ shape, and controls; cross-sectional	149	Modified version of the SDQ; participants listed and rated physical characteristics according to the following standpoints: (a) self-actual; (b) self-ideal; (c) self-should; (d) other-actual; and (e) other-ideal.	Compared groups identified using DSM-IV criteria, and BDI	BDD patients displayed significant discrepancies between their self-actual and both their self-ideal and self-should, but no significant discrepancies between their self-actual and other-actual or other-ideal domains.

Bentall, Kinderman & Morrison, 2005	Bipolar patients either currently depressed (24), manic/hypomanic (22), or remitted (19), and non-patient controls (23); cross-sectional	88	SDQ	Compared groups established using DSM criteria	Depressed participants showed more actual-ideal and actual-ought discrepancies. Manic patients had more actual-ideal consistency (less discrepancy) than non-clinical controls. Depressed patients wrote very negative self-actual descriptions.
Cornette, Strauman, Abramson & Busch, 2009	Students; cross-sectional	152	SDQ: Assessed actual-ideal-future, the extent to which individuals believe there will continue to be a discrepancy, and actual-ideal-can, the extent to which individuals feel they can never achieve the ideal.	Hopelessness, BDI, suicidal ideation	Actual-ideal-future discrepancies related to hopelessness, depression, and suicidal ideation. Actual-ideal and actual-ought discrepancies correlated with hopelessness, depression and suicidal ideation.
Moretti & Higgins, 1990	Students; cross-sectional	60	Ideal-ought discrepancy (idiographic – self nominated attributes, and nomothetic – personality characteristics)	SES	Groups with high, moderate and low ideal-ought discrepancy were compared; Idiographic ideal-ought discrepancy was related to self esteem.
Renner & Leibetseder, 2000	Psychotherapy patients and controls; cross-sectional	139	Dyadic conflict (inconsistency between attitudes and reality) (Lauterbach Computerised Intrapersonal Conflict Assessment (CICA))	GSI SCL	Positive associations were found between dyadic conflict and all clinical symptom measures in the combined sample, low conflict group and high conflict group.

Watson & Watts, 2001	Students; cross-sectional	96	Personal construct (idiographic) and conventional construct measures of actual-ideal discrepancy and discrepancy between actual and ideal social selves	Neuroticism (NEO-FFI)	Self discrepancies were found to predict neuroticism.
Berking, Grosse-Holtforth & Jacobi, 2003	Psychotherapy in-patients; prospective (end of therapy follow up, mean time 39 days or 7 sessions)	62	Incongruence questionnaire (INK)	VEV (changes in behaviour and experience), therapy outcome	Incongruence was reduced in CBT; the reduction in incongruence was associated with the positive change in outcome measures.

Table 1.5.

Self-concordance and success in personal goals

Authors	Sample; design	N	Measure	Relationships assessed	Result
Ruehlman & Wolchik, 1988	Students; cross-sectional	229	Personal projects inventory, goal mastery, strain, self-involvement	MHI	A positive association was found between self involvement and mastery and well being, and an inverse relationship between strain and well being.
Brunstein, 1993	Students; cross-sectional	88	Goal progress, commitment to goals, perceived goal attainability	SWLS	Positive associations were found between the three goal measures and well being; commitment moderated the effect of goal attainability, and goal progress mediated the effect of this commitment x attainability effect on well being.
Karoly & Lecci, 1993	Students; cross-sectional	71	Personal projects analysis, expected goal success, expected reward	MMPI	Hypochondriasis correlated with goal appraisal dimensions; hypochondriacs perceived themselves to be engaged in stressful, difficult and less rewarding pursuits.

Sheldon & Kasser, 1995	Study 1: students; cross-sectional Study 2: students; prospective (8 week follow up, 2 week diary)	Study 1: 161 Study 2: 113	Functional coherence – the extent to which personal strivings help bring about each other/ higher level goals; and Organismic congruence – striving for self-determined, intrinsic reasons	SAS, PVS, PAS, NAS, NEO, self-worth	Study 1: Coherence and congruence were related to one another and to measures of health and well being. Study 2: Coherence and congruence were prospective predictors of daily mood, vitality, and engagement in meaningful activities.
Sheldon & Elliot, 1998	Students; cross-sectional and prospective (Study 2: 3 assessments over a 3 month semester; Study 3: 8 assessments over a semester of activities and 3 of effort and attainment)	Study 1: 128 Study 2: 141 Study 3: 82	Autonomous and controlled motivation for pursuing goals, goal success	Goal attainment	Autonomous motivation for pursuing goals predicted attainment. Mediational model suggested that autonomy led to attainment through sustained effort investment.
King, Richards & Stemmerich, 1998	Students; cross-sectional	80	Daily goals, ratings of how instrumental goals are to life goals	SWLS, SES. BDI	Daily goals that achieve life goals and avoid worst fears lead to positive associations with life satisfaction and self-esteem, and negative association with depression.

McGregor & Little, 1998	Students; cross sectional	Study 1: 146 Study 2: 179	Personal projects analysis, Goal efficacy (feel goals are achievable) and integrity (goals consistent with one's core values and self identity)	CES-D, PSS-14, ABS (positive affect), PIL	Efficacy and integrity were associated with well being; goal efficacy was associated with happiness, and goal integrity was associated with perceived meaning in one's life.
Poehlmann, 2001	Normal adults; cross-sectional	470	Agentic and communal motivation for pursuing goals, goal success	TPQ, BDI, SWLS	Positive associations were found with both agency and communion goal success and mental good-health and life satisfaction, and negative associations with depression.
Chirkov, Ryan, Kim & Kaplan, 2003	Students (South Korea, Russia, Turkey, US); cross-sectional	559	Self concordance measure	PANAS, SWLS	There was a positive association between self-concordance and well being.
Sheldon, Elliot, Ryan et al., 2004	Students (US, China, South Korea, Taiwan); cross-sectional	551	Personal strivings, rated for intrinsic, extrinsic, identified and introjected motivation	PANAS, SWLS	Self concordant (intrinsic) motivation predicted well being.
Spence, Oades & Caputi, 2004	Students; cross-sectional	95	Rated 8 listed personal strivings for autonomous and controlled motivations	Trait Emotional Intelligence, PANAS	Overall, motivations correlated with well being. However, identified motivation specifically (truly believing that a goal is important to pursue, that it relates to one's core values) predicted well being, along with emotional intelligence – emotion regulation.

Emmons & Diener, 1986	Students; prospective (30 day daily diary)	336	Goal accomplishment, goal importance	Positive affect (4 adjectives), negative affect (5 adjectives)	Both goal importance and goal accomplishment were positively associated with positive affect and negatively associated with negative affect.
Elliot, Sheldon & Church, 1997	Students; prospective (3 month/ 1 semester follow up)	Study 1: 166 Study 2: 65	Personal strivings, perceived success in strivings	PANAS, SWLS	Participants with more avoidance goals expected to do worse in terms of achieving their goals. Perceived progress in goals was a significant predictor of subjective well being.
Sheldon & Kasser, 1998	Students; prospective (3 month/ 1 semester follow up)	90	Personal projects, self concordance, goal progress	CES-D, SWLS, PANAS	Goal progress predicted increases in well being. Increases in well being depended on concordance of participants' goals with their inherent psychological needs.
Brunstein, Schultheiss & Grassmann, 1998	Students; prospective (Study 1: 2 x 6 day diaries in 2 week period; Study 2: 3 month/ 1 semester follow up)	Study 1: 98 Study 2: 127	Picture-story test of motives, progress in agency goals, progress in communion goals	Mood adjective checklist; NEO-FFI	Study 1: Progress toward motive-congruent goals accounted for daily experiences of emotional well-being. Study 2: An increase in emotional wellbeing was predicted by the combination of high commitment to, and high attainability of motive-congruent goals. High commitment to motive-incongruent goals predicted a decline in emotional well-being over time.

Sheldon & Elliot, 1999	Students; prospective (3 month/ 1 semester follow up)	Study 1: 169 Study 2: 73	Self concordance, goal progress	PANAS, SWLS	Individuals pursuing self-concordant goals were more likely to attain their goals, and the attainment of self concordant goals was related to well being. This effect of attainment on well being was mediated by need satisfaction, i.e. experience of autonomy, competence and relatedness.
Reis, Sheldon, Gable, Roscoe & Ryan, 2000	Students; prospective (2 week daily diary)	67	Rated daily autonomy, competence, and relatedness in activities	self esteem, attachment style, loneliness, well being adjective list, psychological vitality scale, symptom checklist	Autonomy, relatedness and competence correlated with one another and with indices of well being. Competence in activities strongest predictor of daily well being. Increasing daily autonomy predicted decreasing negative affect and symptoms.
Sheldon & Houser-Marko, 2001	Students; prospective (Study 1: 1 year follow up; Study 2: 2 week follow up)	Study 1: 189 Study 2: 94	Personal projects, self concordance, goal progress	SACQ	Self-concordant motivation predicts attainment of goals over time, and goal progress was related to longitudinal increases in well being.
Koestner, Lekes, Powers et al., 2002	Students; prospective (2 week follow up)	106	Weekend goals, self-concordance, self-efficacy, commitment and difficulty, goal progress	PANAS	Self-concordance was related to goal progress, and goal progress was related to increased positive affect and decreased negative affect.

	Students; prospective (1 month follow up)	59	New year's resolutions, self-concordance, self-efficacy, commitment, difficulty, goal progress	Affect scale	Goal progress was related to self- concordance, efficacy and commitment, and goal progress marginally predicted affect.
Elliot & Church, 2002	Students seeking psychotherapy at University counselling service; prospective (follow up after 12 therapy sessions)	98	Perceived progress in therapy goals	Subjective well being scale	Clients with more avoidance (relative to approach) goals experienced a smaller increase in well being during therapy. Perceived goal progress was a significant predictor of post therapy well being.
Sheldon, Deci, Ryan & Kasser, 2004	Students; cross sectional (study 1 and 2) and prospective (study 3: 1 year follow up)	Study 1: 714 Study 2: 221 Study 3: 159	Study 1: Presented with extrinsic and extrinsic goals and rated different motivations for each Study 2: Listed own goals and rated for intrinsic and extrinsic content and autonomous and controlled motivation Study 3: Listed post-graduation goals and rated as above	Study 1: Expected happiness upon success Study 2: PANAS, SWLS Study 3: PANAS, SWLS (baseline and 1 year follow up)	Study 1: Relative greater autonomous motivation and lower extrinsic content of goals predicted expected happiness on success. Study 2: Autonomous motivation predicted well being composite. Extrinsic content was a stronger negative predictor of well being than intrinsic content as a positive predictor. Study 3: Autonomy and extrinsic content predicted changes in well being over time.

Veronneau, Koestner & Abela, 2004	3 rd and 7 th grade school children; prospective	331	Rated autonomy, competence, and relatedness in activities	Children's Depression Inventory, Children's Multiple Affect Adjective Checklist	Autonomy predicted more concurrent positive affect and less negative affect. Competence in activities predicted concurrent and future affect and depressive symptoms.
Sheldon & Niemiec, 2006	Students; cross sectional (study 1) and prospective (study 2: follow up after semester, study 2: diaries 8 times during semester)	Study 1: 315 Study 2: 145 Study 3: 83	Satisfaction of three needs: autonomy, competence and relatedness, and index of balance of the three needs	Study 1: PANAS, SLWS Study 2: PANAS, SWLS, NEO-PPI Study 3: Emmons Mood adjective list, Brunstein daily life satisfaction	Study 1: Autonomy and competence related to well being, and balance of need satisfaction related to well being. Study 2: Semester long balance related to well being at end of semester, independent of trait negative affectivity. Study 3: Autonomy and competence related to daily well being across the semester.
Burton, Lydon, D'Allessandro & Koestner, 2006	Study 1: Elementary school children; prospective (predicted grades 7 days later) Study 2: students; prospective (10 day follow up)	Study 1: 241 Study 2: 60	Study 1: Self-regulation scale, rated reasons for doing well in class, identified vs. intrinsic motivation. Study 2: perceived locus of causality for doing well at the course, primed in task with either intrinsic, extrinsic, or no reasons.	Study 1: report card grades, children's PANAS Study 2: SWLS	Study 1: Intrinsic motivation predicted well being independent of academic performance (which was predicted by external motivation). The more external motivations for academic performance, the more well being was contingent on performance. Study 2: Priming of intrinsic motivation predicted greater well being at 10 day follow up.

Romero, Villar, Luengo & Gomez-Fraguela, 2009	Adults ; cross-sectional	405	Listed personal strivings and calculated a self-concordance	PANAS, SWLS, PILS, NEO-PI-R	Intensity (importance of strivings) and Efficacy (success in strivings) related to well being, but Externality (extrinsic motivation for strivings) did not relate to well being. Self concordance did relate to SWL, PIL, and lower levels of negative affect.
Niemiec, Ryan & Deci, 2009	Post-college adults; prospective (1 year follow up)	147	Aspiration index – participants rated 4 intrinsic and 3 extrinsic aspirations for importance and achievement	Basic Psychological Need Satisfaction Scale, SWLS, MSEI self esteem, PANAS, PSCL, STAI	Importance predicted goal achievement. Success in intrinsically motivated goals predicted psychological health, and in extrinsically motivated goals predicted ill health. The association between intrinsic goal achievement and well being was mediated by autonomy, competence and relatedness.

Note. AIM = Affective Intensity Measure; AIT = Ambiguity Intolerance; BABS = Bradburn Affect Balance Scale; BDI = Beck Depression Inventory; BINGE = Binge Eating Scale; BSI = Brief Symptom Inventory; BSQ = Body Shape Questionnaire; CES-D = Centre for Epidemiological Survey – Depression; DAS = Dysfunctional Attitudes Scale; DIS = Distraction Manipulation; DPQ = Differential Personality Questionnaire; DSSI = Duke Social Support Index; DSM = Diagnostic and Statistical Manual of Mental Disorders; EAT = Eating Attitudes Test; EPQ = Eysenck Personality Questionnaire; GHQ = General Health Questionnaire; GSI = Global Symptom Inventory; HRSD = Hamilton Rating Scale for Depression; HSC = Hopkins Symptom Checklist; IIP = Inventory of Interpersonal Problems; KASSL = German Symptom Checklist; LES = Life Evaluation Scale; MARS = Multiple Affect Rating Scale; MHI = Mental Health Inventory; MMPI = Minnesota Multiphasic Personality Inventory; MPQ = Multidimensional Personality Questionnaire; NEO-FFI = Five Factor Inventory of Personality; NEO-PI = Neuroticism scale of Personality Inventory; PANAS = Positive & Negative Affect Schedule; PBC = Pain Behaviour Checklist; PCS = Pain Catastrophising Scale; PSCL = Pennebaker Symptom Checklist; PIL = Purpose in Life Test; PILL = Pennebaker Inventory of Limbic Languidness; PSI = Problem Solving Inventory; PSS-14 = PTSD Symptom Scale – 14 item version; PVS = Positive Vitality Scale; SAS = Self Actualisation Scale; SACQ = Student Adjustment to College Questionnaire; SADS = Schedule for Affective Disorders; SCL = Symptom Checklist; SES = Rosenberg Self-Esteem Scale; SF-36 = Short Form Health Survey; STAI = State Trait Anxiety Inventory; SWLS = Satisfaction with Life Scale; TPQ = Tri-dimensional Personality Questionnaire; UPP = Unfulfilled Positive Potential; VEV = Questionnaire for the Assessment of changes in Behaviour and Experiencing; WCQ = Ways of Coping Questionnaire

1.10. Conflict between goals, plans or projects

1.10.1. Cross sectional studies. Ten studies were identified that used matrix methods. Four of these studies found associations between conflict and negative outcomes. Conflict between personal projects was associated with lower life satisfaction in a student sample (Palys & Little, 1983). Conflict between personal strivings correlated with greater negative affect, more somatic symptoms, and more depression and anxiety symptoms in a student sample (Emmons & King, 1988). Conflicting work goals related to lower job satisfaction and greater exhaustion in a sample of adult health-care employees (Pomaki, Maes & ter Doest, 2004). In a student study, Freitas, Clark, Kim and Levy (2009) found lower levels of conflict to be related to goal importance, anticipated happiness on goal success, and positive affect. In addition, individuals who were low in conflict and tended to re-frame events in high level terms experienced more positive affect. However, other studies found mixed results. Perring, Oatle and Smith (1988) found that conflict between daily activities was related to more symptoms of poor general health in young, student samples, but not adult, non-student samples. Sheldon and Kasser (1995) and King, Richards and Stemmerich (1998) found no relationship between striving conflict and subjective well-being in their student samples. Wallenius (2000) found no relationship between conflict and well-being in a further student sample. However, Wallenius (2000) did find a greater amount of conflict in abstract or higher-level projects, and individuals who tended to list more abstract projects were generally more distressed, supporting the idea that conflict at higher levels may be more detrimental. Romero, Villar, Luengo and Gomez-Fraguela (2009) found levels of conflict to be unrelated to well-being measures and NEO-PI personality domains. Finally, Kelly et al. (2011) found that goal conflict and goal ambivalence interacted

to predict depression in a student sample, such that the combination of low goal conflict and high ambivalence was associated with elevated depression symptoms.

Four studies were found that measured overall conflict using the CICA. Conflict was correlated with symptom measures in psychotherapy clients and participants of a psychological training course in the workplace (Renner & Leibetseder, 2000). Conflict was correlated with negative affect in both a high conflict group (soldiers) and a low conflict group (art students) (Lauterbach, 1990). Stangier, Ukrow, Schermelleh-Engel et al. (2007) found that depressed individuals had higher conflict scores, and conflict correlated with interpersonal problems and problem solving difficulties. In a sample of hospitalised and long-term abstinent alcohol using patients, Lauterbach (1996) found that hospitalised patients had higher levels of conflict, and conflict was correlated with symptom severity, especially in individuals who were intolerant of ambiguity.

1.10.2. Prospective studies. Six studies were identified that used matrix methods to assess the effects of conflict prospectively. Two of these studies used student samples. Emmons (1986) found that conflict predicted more negative affect, less positive affect, and less life satisfaction. Emmons and King (1988) found conflict to predict more rumination, less goal directed activity over time, more somatic symptoms and more frequent physician visits in the subsequent year. Three further studies, two of which were conducted with non-students, failed to replicate these findings. In a large sample of adult managers, conflict measured by composite matrices including existing and new goals was associated with inhibited attainment of the new goals, but not subjective well-being, although an increase in conflict over time did predict a decrease in positive affect and conflict at follow up was related to negative affect (Kehr, 2003). When using unipolar assessment scales in a study of

adult exercise beginners, the extent to which goals interfered, but not the extent to which they facilitated each other, predicted subjective well-being (Riediger & Freund, 2004). When two types of conflict (resource conflict and inherent conflict) were compared and matrices were filled out on participants' behalf by the researchers no prospective relationship was found between conflict and well-being in a student sample (Segerstrom & Solberg-Nes, 2007). However, Karoly, Okun, Ruehlman and Pugliese (2008) found that when participants rated how much their four most important goals conflicted, this conflict predicted the amount of pain-induced fear in a sample of 100 adults with chronic lower back pain.

Two studies examined the prospective effects of conflict as measured by the CICA. Lauterbach (1975), in a study of 5 neurotic and depressed patients, found patients' levels of conflict in their personal problems and beliefs about themselves were predictive of their moods (including depression, fatigue and tension) over a period of several months. Hoyer Fecht, Lauterbach & Schneider (2001) found that conflict predicted symptoms, mood and subjective well-being in alcoholic in-patients. Feixas, Saul and Avila-Espada (2009) assessed conflict in a large sample of clinical and non-clinical participants using the Repertory Grid Technique and found that whilst Triadic Conflict and Dilemmatic Constructs were not predictive of outcomes, one type of conflict, Implicative Dilemmas, discriminated the clinical group from the control group and was correlated with symptom severity across the sample.

Another prospective study (Riediger & Freund, 2008) used a diary method, where individuals recorded instances where they had done one thing but wanted to, or felt they should have done another, and found that motivational conflict predicted lower emotional well-being in a sample of adults of different ages. This study also

found that the lower levels of motivational conflict in the older aged groups predicted the better well-being in these groups. Unlike the studies using matrix methodology with healthy adult samples, this study did find a relationship between conflict and well-being, possibly because the researchers used a more ecologically-valid measure of conflict; individuals recorded instances of *experienced* conflict, which they recorded as and when they happened. It may be that whilst an overall measure of the extent of conflict is a good indicator of distress in student groups, the feeling or perception of being in conflict in everyday situations is more predictive of distress in adult samples. The data reported here suggests that matrix methods may not be useful for assessing detrimental conflict in adult samples.

In the subset of research on goal conflict, the data are somewhat inconsistent. It has been argued that the evidence for the effects of conflict as assessed using matrix methods is inconsistent because the matrix method is not actually assessing *conflict*, but rather the overall amount of inter-goal *facilitation* in a person's set of goals (Sheldon & Kasser, 1995). This suggestion is supported by firstly the observation that SIM conflict means tend to be low and generally in the positive range (e.g., Emmons & King, 1988), indicating that on average individuals report that their goals help rather than harm each other, and secondly the results of Riediger and Freund's (2004) study. Riediger and Freund used unipolar assessment scales to assess whether inter-goal conflict and inter-goal facilitation had differential effects on well-being found that whilst facilitation was not related to well-being, interference between goals did relate to poorer well-being. If matrix methods are indeed assessing facilitation rather than conflict, this may explain the inconsistent relationships with poor outcomes.

1.11. Goal ambivalence

1.11.1. Cross-sectional studies. Four studies were identified that assessed ambivalence with the question from the Strivings Assessment Scale, addressing anticipated unhappiness upon succeeding in a goal. In student samples, ambivalence was associated with more negative affect, somatisation, anxiety and depression (Emmons & King, 1988), and lower life satisfaction and more depression (King, Richards & Stemmerich, 1998). However, in a large, adult sample, Romero et al. (2009) found that ambivalence was not independently related to well-being measures. Interestingly however, Romero et al. did find that when they subjected the different aspects of goal strivings to Principal Components Analysis, ambivalence fell into the Externality category, which mainly referred to the extent to which individuals' goals were extrinsically motivated. This may offer an answer to the question of what might cause ambivalence about pursuing goals; it may be that individuals are more likely to feel ambivalent about pursuing goals that they are pursuing for extrinsic reasons. Finally, as mentioned above, Kelly et al. (2011) found that ambivalence interacted with goal conflict, such that elevated ambivalence was associated with depression when goal conflict was low. The presence of an interaction effect may account for previous inconsistent findings.

Three cross-sectional studies were identified which used the Ambivalence over Emotional Expression Questionnaire (AEQ). This form of ambivalence was found to be related to lower life satisfaction, less social support, less positive affect and more negative affect in a student group (Emmons & Colby, 1995). Tucker, Winkelman, Katz and Bermas (2006) found that ambivalence was related to poorer well-being in arthritis patients, especially if their spouse was also highly ambivalent, and Porter, Keefe, Lipkus and Hurwitz (2005) found that in cancer patients

ambivalence was related to pain symptoms and catastrophising and lower general well-being, again especially if the patient's spouse was also highly ambivalent.

1.11.2. Prospective studies. Two prospective studies included the SAS measure of ambivalence. An experience sampling study of a student sample found that ambivalence predicted negative affect over time (Emmons, 1986); and a further student study with a one-year follow up period found that ambivalence predicted psychological symptoms over time, including affect, anxiety and depression, and predicted more rumination about goals, but did not prospectively predict measures of physical health (Emmons & King, 1988).

Four studies used the AEQ measure of ambivalence. In a diary study using students, ambivalence predicted questionnaire measures of well-being but not daily symptom reports (King & Emmons, 1990). King and Emmons (1991) found that ambivalence predicted less positive and more negative affect, as well as psychological and physical symptoms, in their study of adult married couples. Ambivalence was predicted by dependency and self criticism, which also predicted depressive symptoms in a student sample (Mongrain & Zuroff, 1994). Finally, Katz and Campbell (1994) found ambivalence to predict depression, negative affect, stress and physical symptoms over time in another student sample.

A limitation of the research in this area is that the majority of the research was carried out on purely student samples. There is no evidence for a relationship between striving ambivalence and well-being in adult samples. However, the relationship between ambivalence about emotional expression goals and distress was replicated in the small number of non-student studies, indicating that the results from student samples in this area of research may generalise to other populations. The evidence for ambivalence about emotional expression is certainly more unanimous

than for striving ambivalence, as the one adult study failed to replicate the finding that striving ambivalence related to well-being. It is possible that different forms of ambivalence are distressing for different age groups.

1.12. Self-discrepancies

1.12.1. Cross-sectional studies. Twelve studies used the self discrepancies questionnaire (SDQ) to measure self-discrepancies. Higgins, Klein and Strauman (1985) found actual-ideal discrepancies to relate to depression related emotions and symptoms and actual-ought discrepancies to relate to anxiety related symptoms and emotions in a group of students. In a replication with a clinical sample, Strauman (1989) found clinically depressed individuals to have the greatest actual-ideal discrepancies and socially phobic individuals to have the greatest actual-ought discrepancies, compared to one another and to non-clinical controls. Further, priming of these discrepancies was found to temporarily induce depression and anxiety symptoms respectively, especially for the individuals with greater self-discrepancies. Strauman, Vookles, Berenstein et al. (1991) found that ideal-ought discrepancies were related to anorexic behaviours and beliefs, and ideal-actual discrepancies were related to bulimic behaviours and beliefs in University students. In a study of students with clinical levels of depression, anxiety, or depression and anxiety symptoms, Scott and O'Hara (1993) again found depressed students had the greatest actual-ideal discrepancies, whilst anxious participants had more actual-ought discrepancies. Strauman, Lemieux and Coe (1993) found that in clinical (selected on the basis of anxiety and dysphoria scores) and control participants a greater actual-ideal discrepancy was related to more symptoms of dysphoria or depression, whilst a greater actual-ought discrepancy was related to symptoms of anxiety. In another clinical study, Fairbrother and Morretti (1998) found actual-ideal discrepancies to be

greatest in currently depressed participants, followed by remitted depressed participants, and lowest in control participants. The fact that discrepancies are observed in remitted patients suggests that it is not depressive symptoms causing the sense of self discrepancy, but rather the self discrepancy is likely to be a risk or causal factor in depression. In this study, levels of both types of discrepancies were also correlated with symptom severity. In a student study, Carver, Lawrence and Scheier (1999) found that self discrepancies correlated with depression and anxiety symptoms, and found that discrepancies between actual selves and feared selves inversely related to symptoms and mediated the effect of actual-ought discrepancies; actual-ought discrepancies were more strongly related to anxiety symptoms when there was a greater actual-feared discrepancy. In other words, when someone's feared self is distant, feelings of being different to how you ought to be leads to anxiety, but when one's actual self is similar to one's feared self, actual-ought discrepancies are no longer important, in other words, avoidance motivation dominates over 'ought' motivation when one's feared self seems near.

Self discrepancies have also been studied in relation to paranoia symptoms, body dysmorphic disorder, mania symptoms, and suicidal ideation. Kinderman, Prince, Waller and Peters (2003) found that following an emotional Stroop task where participants attention was directed towards a threat, a group with persecutory delusions reduced in their actual-ideal discrepancy, but increased in their actual self-other self discrepancy, relative to a psychiatric control group and a non-clinical control group. Veale, Kinderman, Riley and Lambrou (2003) found that patient with body dysmorphic disorder displayed significant actual-ideal and actual-should discrepancies, but no significant self-actual – other-actual or other-ideal discrepancies. Bentall, Kinderman and Morrison (2005) found that bipolar-depressed

patients showed more self discrepancies than other clinical and control groups, currently manic or hypomanic patients had less actual-ideal discrepancies than control groups, and overall, depressed patients wrote the most negative actual-self descriptions. In a recent student study, Cornette, Strauman, Abramson and Busch (2009) found that actual-ideal and actual-ought discrepancies related to hopelessness, depression, and suicidal ideation, particularly when individuals believed there would continue to be a discrepancy in the future.

In a writing task study using a student sample, actual-ideal discrepant individuals felt more sad when writing, whilst actual-ought discrepant individuals felt more agitated, and priming of these discrepancies was found to induce the same moods (Higgins, Bond, Klein & Strauman, 1986). One study used the CICA measure of self discrepancies and found that actual-ideal discrepancies were related to all clinical symptom measures (Renner & Leibetseder, 2000). When comparing idiographic and nomothetic measures, Morretti and Higgins (1990) found that idiographic measures of ideal-ought discrepancies related to measures of self esteem in students, and Watson and Watts (2001) found that when using idiographic measures self discrepancies related to higher levels of neuroticism in a non-clinical student sample.

1.12.2. Prospective studies. Six prospective studies were identified which assessed self discrepancies. Schwartz (1974) found that individuals higher in depression made less accurate grade predictions; they had greater actual-ideal discrepancies. Strauman and Higgins (1988) found that in a student group, actual-ideal discrepancies were uniquely related to dejection, anger, and frustration at self, and to actual levels of depression at follow up, whilst actual-ought discrepancies were uniquely related to agitation, anger at others and resentment, and to social

anxiety symptoms at follow up. Conflicting or discrepant senses of self were found to relate to emotional-motivational problems, interpreted as indicating chronic approach-avoidance conflict (Van Hook & Higgins, 1988). Strauman, Kolden, Stromquist et al. (2001) found that over time psychotherapy out-patients showed less improvement if they had greater self-discrepancies, but overall psychotherapy reduced discrepancies. Pierce, Strauman and Lowe Vandell (1999) found that in postpartum mothers, greater actual-ideal discrepancies predicted dejection and sadness, especially for those with less social support, and life events also led to more dejection when mothers were more discrepant. One study using the incongruence questionnaire to assess discrepancy between actual and ideal states, conducted by Berking, Grosse-Holtforth and Jacobi (2003) found that a reduction in discrepancy was associated with positive changes in outcome measures after therapy in a group of psychotherapy in-patients.

Overall, there is convincing evidence that self discrepancies relate to psychological symptoms and lower well-being, in student, analogue, and clinical samples, in both cross-sectional and prospective studies. There is also evidence that specific discrepancies relate to different symptoms and disorders; it would appear that actual-ideal discrepancies are implicated in depression, whilst actual-ought discrepancies are implicated in anxiety, and discrepancies also seem important for other clinical symptoms. Most of the studies identified in this area have focused on the types of self-discrepancies which indicate goal non-attainment, for example, between actual and ideal views of the self, although there is some evidence for the effects of conflict between opposing self-guides. The hierarchical model can incorporate both types of discrepancy. Discrepancies between actual and desired senses of self would indicate goals an individual is failing to achieve; their

perception of reality does not match their goal or reference point. Carey (2008) argues that according to control theory, both experiences of being torn or struggling between opposing goals, and experiences of not succeeding in goals one is trying to succeed in, are indicative of internal conflict. The hierarchical model would propose that discrepancies between conflicting self-guides would be as detrimental to well-being as discrepancies between actual and goal views of the self. However, this is an empirical question which has been understudied.

1.13. Self concordance

1.13.1. Cross-sectional studies. Eleven studies were identified which assessed factors relating to goal self concordance. Three studies using student samples found that progress or perceived progress in self-concordant, intrinsically motivated, instrumental goals was found to be related to higher scores on subjective well-being measures, higher self esteem, and lower depression (King, Richards & Stemmerich, 1998); well-being in a cross-cultural sample (Sheldon, Elliot, Ryan et al., 2004); and happiness and perceived meaning in life (McGregor & Little, 1998). In students, progress in goals that individuals are committed to, or perceive to be important was related to well-being (Brunstein, 1993) and more positive and less negative affect (Emmons & Diener, 1986). Pursuing concordant goals was associated with greater well-being in a cross-cultural student sample (Chirkov, Ryan, Kim & Kaplan, 2003). Pursuing goals rated as high in terms of self-involvement and mastery, but low on strain was associated with well-being in a further student sample (Ruelman & Wolchik, 1988). Poehlman (2001), in a study of non-student adults, found that success in both agency (goals for own benefit) and communion (goals for the group's benefit) goals was related to mental good health and subjective well-being. Sheldon and Kasser (1995) found that coherence and congruence related to

one another and to students' health and well-being. Spence, Oades and Caputi (2004) found that the extent to which people felt their strivings were autonomously motivated correlated with well-being, but linear modelling indicated it was a poor predictor. However, identified motivation specifically (truly believing that a goal is important to pursue, that it relates to one's core values) predicted emotional well-being. Finally, in a recent study using a large, adult sample Romero et al. (2009) found self concordance to be related to satisfaction with life, sense of purpose in life, and lower levels of negative affect.

1.13.2. Prospective studies. Fourteen studies were identified which assessed prospective effects of pursuing self-concordant goals. Progress in or attainment of goals predicted well-being in healthy student populations (Elliot, Sheldon & Church, 1997; Sheldon & Elliot, 1999) and post-therapy well-being for students undergoing therapy or counselling (Elliot & Church, 2002). Striving for self-concordant intrinsic or autonomously motivated goals predicted students' goal attainment (Sheldon & Elliot 1998, 1999; Sheldon & Houser-Marko, 2001) and subjective well-being (Sheldon & Houser-Marko, 2001). Five further student studies showed that progress in goals that were concordant with individuals' inherent needs predicted well-being (Brunstein, Schultheiss & Grassman, 1998; Sheldon & Kasser, 1998; Sheldon & Elliot, 1999), increases in positive affect and decreases in negative affect over time (Koestner, Lekes, Powers et al., 2002), and improved daily mood, vitality, and engagement in meaningful activities (Sheldon & Kasser, 1995), whereas commitment to and progress in motive-incongruent goals predicted a decline in well-being (Brunstein, Schultheiss & Grassman, 1998).

In a study of school children, Burton, Lydon, D'Alessandro and Koestner (2006) found that intrinsic motivations predicted well-being independently of

academic performance, and priming of intrinsic motivation predicted well-being 10 days later. However, academic performance was predicted by external or controlled motivation, and the more external motivation children had for their academic performance, the more their well-being was contingent on their academic performance. This study has clear implications for both education and parenting styles; encouraging children to work hard for external reasons like praise or gifts may improve their grades, but may worsen their psychological well-being.

In a series of three studies, Sheldon, Deci, Ryan and Kasser (2004) found that students who pursued intrinsic goals for autonomous, rather than controlled reasons anticipated greater happiness on success in their goals and experienced greater well-being. Fulfilment of intrinsic, fundamental needs of autonomy, competence and relatedness related to indices of daily well-being in a student sample (Reis, Sheldon, Gable, Roscoe & Ryan, 2000) and predicted concurrent and future affect and depressive symptoms in a sample of school children (Veronneau, Koestner & Abela, 2004). Both the fulfilment of these needs and an index of balance across these three needs predicted concurrent, future and daily well-being in three student samples (Sheldon & Niemiec, 2006). In a study of post-college adults, whilst achieving goals that were intrinsically motivated predicted psychological health, this prediction was mediated by the fulfilment of autonomy, competence and relatedness needs (Niemiec, Ryan & Deci, 2009).

The findings in this area have been replicated in samples of adults, students, and children, and two large-scale cross-cultural student studies have been conducted replicating the relationship between self-concordant goal striving and well-being, suggesting that these findings are reliable and valid. However, it remains to be shown whether the effects of the different aspects of self-concordant goal striving,

including the intrinsic or extrinsic content of goals, the internal or external motivations for pursuing goals, the amount of success or perceived success in goals, and the amount that one's goals fulfil of overall needs such as autonomy or competence, either relate to, or are subsumed by one core aspect. For example, it may be that success in goals is the most important predictor of well-being, or fulfilment of needs, and that these other factors such as autonomous motivation simply make these more likely. This suggestion would be supported by Niemiec et al.'s (2009) finding that the relationship between type of motivation and psychological health was fully mediated by need fulfilment.

Discussion

The present review demonstrates that there is converging evidence for the relationship between the four concepts in the hierarchical model and well-being. 78 of the 83 studies reviewed found associations or predictive relations between goal conflict, ambivalence, discrepancy and concordance and a range of outcome measures. The detrimental consequences of goal conflict, ambivalence, and self discrepancy, and the absence of self concordance, were significant and wide-ranging and included increased levels of psychological symptoms, for example, anxiety, depression and negative affect; negative effects on subjective well-being factors such as life satisfaction and self esteem; disruptive effects on self-regulatory variables like goal progress or perceived likelihood of goal success; physical effects including somatic symptoms, physician visits, pain symptoms and physical illnesses; and negative consequences in applied contexts, for example, reduced job satisfaction and greater job-related exhaustion. Thus, the majority of the studies reviewed suggest a relationship between conflict, ambivalence and self discrepancies and greater levels of psychological distress and to poorer subjective well-being. In contrast, striving for

goals that are concordant with one's overall motivations and needs relates to subjective well-being and reduced psychological distress.

Conflict between goals, plans or projects, especially as assessed by the CICA, was related to both psychological and physical ill health, as well as poor subjective well-being, and therapies that targeted conflict (CBT and psychotherapy) reduced patients' symptoms, as well as their levels of conflict. Ambivalence about pursuing goals was related to negative affect particularly and measures of psychological well-being. Ambivalence about expressing emotion was related to lower levels of psychological well-being and higher levels of psychological symptoms, as well as poorer well-being and more physical symptoms in physical health patients, particularly if their spouse was also highly ambivalent about expressing emotion. Discrepancies between actual and ideal or ought selves related to poor emotional well-being and low self esteem and symptom severity in clinical populations. Actual-ideal discrepancies related specifically to feelings of dejection and depression, whilst actual-ought discrepancies related specifically to feelings of anxiety and agitation. The effect of ideal-ought discrepancies, or conflict between one's own goals for one's self and the demands of expectations of valued others, has been understudied. Finally, concordance between individuals' overall motivations and the goals they pursue related consistently to positive subjective well-being, greater goal attainment or perceived success in personal goals, and lower levels of psychological and emotional symptoms.

1.14. Accounting for inconsistent findings

The evidence was weakest in the subset of research on goal conflict using matrix based assessments; some studies failed to replicate the finding that conflict between goals has damaging consequences. In addition, Michalak et al. (2004) report

two further unpublished studies which failed to replicate Emmons and King's (1988) finding that goal conflict related to psychological and physical symptoms (Michalak, 2002; Puschel, 2000).

Matrix methods may assess lower-level conflict than methods such as the CICA, and lower-level conflict may be less detrimental to well-being. Michalak et al. (2004) report a low correlation ($r = .07$) between conflict as assessed by the CICA and matrix assessments of conflict, suggesting they may not measure the same form of conflict. Matrix methods assess explicit conflict; the conflict assessment is conscious and participants directly report on the relationships between their goals. However, the CICA measures implicit, arguably less conscious conflict between concepts; participants answer questions about different concepts in turn, relationships between these concepts are assessed indirectly, and the degree of conflict is computed by the programme. Thus it is likely that whilst matrix methods assess conflict that participants are explicitly aware of, the CICA is able to 'tap into' more sub-conscious or unconscious conflict. Explicit, conscious conflict may be less detrimental; if a person is aware that goals they are pursuing are in conflict then they can either accept this conflict, or resolve it, for example, by abandoning a goal that is causing conflict with other goals, or by mobilising more resources. Unconscious conflict is presumably more likely to be pervasive and unresolved over longer periods of time (e.g., Mansell, 2005) and as such is likely to have more negative effects on psychological and physiological health, as it is excessive and unresolved conflict that supposedly derails self-regulation and causes distress (Powers, 1973).

However, this highlights a significant challenge for research in this area. Whilst it can be argued theoretically that higher-level, unconscious conflict might be more likely to be chronic and unresolved and thus more detrimental, none of the

studies identified by this review have explicitly tested this premise. However, this review demonstrates that conflict assessed by implicit measures such as the CICA is more consistently related to well-being than conflict assessed using explicit, matrix measures. The high level, unconscious conflict that is supposedly more detrimental to well-being is presumably less amenable to empirical assessment; matrix measures and other explicit measures of goal conflict can only assess conflict that a participant is consciously aware of and can introspect and report on. Luborsky's Core Conflictual Relationship Theme method has been put forward as a possible method that could be useful for research (Luborsky & Crits-Christoph, 1998). It involves inferring goals or wishes and underlying conflicts from narratives of relationship episodes given in therapy sessions and other contexts, but the procedure is lengthy. In addition, the focus is primarily on inter-personal, rather than intra-personal conflict.

The inconsistent results could be taken to indicate that goal conflict is less important for determining well-being than the other three processes in the framework, either because of its lower-level nature or for other reasons. It has previously been argued that it is not necessarily important whether one's strivings conflict with each other, provided they are collectively instrumental to one's more fundamental goals and needs (Sheldon & Kasser, 1995). In other words, it may not matter if an individual pursues conflicting goals, provided the goals that they pursue help the individual to achieve important overall motivations and needs.

Another possibility is that conflict between goals has both positive and negative effects, leading to inconsistent and hard to interpret results. Some authors have suggested that goal conflict can actually have positive effects (Brim & Kagan, 1980; Turiel, 1974). For example, the identification of conflict between one's goals

might lead a person to clarify or reprioritize his or her goals (Cropanzano, Citera, & Howes, 1995).

Finally, one further possibility is that the amount of conflict at high and low levels in a person's hierarchy of goals might interact, such that for example, high conflict at the low, concrete goal level might only be problematic if there is either very high or very low conflict at the high, abstract goal level, or vice versa. If high and low level conflicts interact to predict symptoms or well-being, this could account for inconsistent findings, as none of the previous research has tested or controlled for this possibility.

Further research is necessary to establish an explanation for the inconsistent evidence in this area. This review certainly calls into question the utility of matrix methods for assessing detrimental goal conflict. In the future, it is important that researchers develop alternative methodologies for assessing detrimental goal conflict and also methodologies which permit direct comparison of the effects of unconscious conflict and conscious conflict, in order to ascertain whether it is only unconscious conflict that affects psychological and physical well-being, or whether conscious conflict can also be problematic. Mediation and moderation analysis could be used to determine whether conflict can explain variation in psychological and physical well over and above the effects of concordant, self-determined goal striving. Finally, other assessment tools could be designed to assess whether facilitation between goals and conflict make independent contributions to well-being.

1.15. Unanswered questions

Overall, there is convincing evidence that conflict, ambivalence about pursuing goals, ambivalence about expressing emotion, and discrepancies between one's goals or desired states and their actual experiences all impede aspects of well-

being, and that striving for self-determined goals that are concordant with one's needs and motives promotes well-being. A number of research questions worthy of further attention now present themselves.

The framework proposed by this review suggests that three different goal-related concepts may contribute to psychological distress, by interrupting adaptive goal-directed self-regulation, whilst one concept representing an absence of conflict, self concordance, promotes psychological well-being. More research is required however, to develop this framework and fully account for the way in which conflict processes might cause or maintain psychological symptoms. In particular, it is necessary to ascertain whether these processes relate to one another or interact to predict well-being. To date there has been little consideration that these processes may relate or interact, let alone that a common mechanism or model might explain their importance. It is however likely that these factors do relate to lead to positive and negative outcomes, for example, Kehr (2003) suggested that conflict resolution and goal attainment should interact to produce well-being. Mediation and moderation analysis could be used to explore the possibility that the different goal conflict components might mediate or moderate the effects of one another, or whether one variable, for example, concordance, as suggested by Sheldon and Kasser (1995), might dominate. Further, it is plausible that the effects of these variables might be mediated or moderated by other psychological processes, for example, one study included in this review found that optimism negated the detrimental effects of conflict (Segerstrom & Solberg Nes, 2007).

It is important to question what makes conflict, ambivalence and self-discrepancies a problem. Clearly, given the pervasiveness of conflict in everyday life, the mere presence of conflict between goals cannot always lead to significant

distress. Indeed, conflict between two valued, pleasurable goals is unlikely to be distressing. Instead, in line with Powers (1973), it is proposed that the chronic, unresolved nature of the conflict determines its negative consequences. It is argued that it is not goal conflict per se that derails self-regulation and leads to low well-being, but rather an inability to manage and prioritise concurrent demands over time in order to achieve important high level goals. Thus, processes or concepts relating to the way in which individuals pursue their goals might also be relevant to well-being, as these may determine how individuals cope with and resolve conflict as it arises.

It is also possible that the extent or pervasiveness of conflict within a goal hierarchy is significant in determining the negative effects, or the extent to which an individual is able to tolerate or accept feeling in conflict, or feeling they are not achieving their goals (Mansell, 2005). Alternatively, it may be the extent to which the conflict is interrupting normal behaviour and preventing an individual from achieving their goals that determines the effect of conflict (e.g., Carey, 2008). Or, awareness might be fundamental. It has been said that awareness is necessary for resolution of conflict to occur (e.g., Mansell, 2005), and Higginson et al. (2011) argue that conflict between one's life goals becomes problematic when one is unaware of their overarching motives.

1.16. Control theory

A number of researchers have alluded to the value and relevance of control theory approaches in explaining the mechanisms behind the detrimental effects of motivational concepts like goal conflict (e.g., Emmons, 1986, 1999). Control theory (Carver & Scheier, 1982; Powers et al., 1960; Powers, 1973) asserts that human behaviour is driven by goals; individuals strive to match their present perceptions

with their goals or reference values. These goals are hierarchically organised, as described above; concrete goals exist at lower levels, and more abstract, self-definitional goals exist at the higher levels. Carey (2008) argues that whilst control theory is not alone in proposing that conflict is a central concept in psychopathology, its contribution is to offer a functional, physical account of the relationship between conflict and psychopathology, and provide psychotherapists with a robust framework from which to formulate psychological problems and maximise therapy efficiency. Control theory has been said to provide a functional and accurate account of the way in which conflict arises, and how it might be resolved (Carey, 2008); and Higginson, Mansell and Wood (2011) argue that control theory offers an explanatory framework for psychotherapeutic change. Control theory proposes that conflict between goals is detrimental because it impedes adaptive self-regulation and argues that chronic, excessive, and unresolved conflict is at the heart of psychopathology (Powers, 1973).

From the control theory perspective, conflict is problematic because individuals control their perceptions and self-regulate by setting and pursuing goals, and so conflict between goals interrupts adaptive self regulation. The framework of four components proposed in this review can be phrased in control theory terms: goal conflict exists when an individual has two goals at the same level in the hierarchy with different or incompatible reference values, ambivalence exists when an individual has two conflicting goals relating to and potentially above the level of the ambivalent goal; self discrepancy exists when an individual possesses conflicting high level self-definitional goals or sets of goals, and finally self concordance is when individuals have well-specified, non-conflicting lower level goals which help them to achieve their higher level goals. Control theory may offer some promise in further articulating the way in which the four motivational concepts reviewed in this

paper might impede or promote successful self-regulation and affect psychological distress and well-being.

1.17. Behaviour

Control theory posits that behaviour is a ‘by-product’ of goal striving, which merely serves the purpose of reducing discrepancies between goals and current perceptions. Goals at the lowest levels of a goal hierarchy specify the behaviours and actions necessary to reduce discrepancies and achieve one’s goals (Powers, 1973). The model articulated in this review does not focus on these low levels. However, it is interesting to consider the relationship between the four concepts and behaviour. Discrepancies may foster behaviour, for the reason described above, whilst conflict is likely to inhibit behaviour, or lead individuals to oscillate from striving towards one goal to the other (Powers, 1973). Previous work by Emmons and King (1988) concluded that individuals who felt ambivalent about pursuing their goals tended to ruminate, rather than direct their behaviour towards the achievement of the ambivalent goals. This may also explain the importance of self concordance for well-being; low self concordance, or the failure to translate goals into behaviour, is key in dysfunction; individuals who have abstract goals but have not determined the concrete steps to achieve these goals can ‘get stuck’ in a cycle of inability to attain goals and rumination on this inability, which results in negative affect and distress (Carver & Scheier, 1982). Thus, a hierarchical understanding of goal pursuit is useful when considering how motivational processes including goal conflict influence behaviour.

1.18. Clinical Implications

It is important to consider whether any of the components of the hierarchical model are amenable to change. A number of empirically-supported therapeutic

approaches explicitly address the motivational processes in the model, for example Motivational Interviewing (Miller & Rollnick, 1991) targets ambivalence, and Method of Levels (Carey, 2006) therapy prioritises addressing conflict and considering higher-level goals. Klinger's current concern construct, which refers to goals, interests, hopes, fears, activities and problems and occupies the latent stage between the setting of a goal and attainment or disengagement, has also been applied to motivational counselling. Therapists can use the Motivation Structure Questionnaire to systematically assess a client's motivational structure and identify maladaptive motivational patterns (Cox & Klinger, 2004). Cognitive Behavioural Therapy often involves focusing on conflicts and maladaptive goals; in particular '3rd wave' approaches such as Compassion Focussed Therapy (e.g., Gilbert, 2000) or Acceptance and Commitment Therapy (e.g., Hayes, Strosahl & Wilson, 2003) involve encouraging clients to accept conflict and discrepancies between goals and perceptions of reality. There appears to be an implicit consensus within the field of clinical psychology and psychological approaches to the treatment of distress that conflict is damaging and should be addressed in therapy. Further empirical research is required to establish whether certain types of goal conflict are more amenable to therapeutic change, or more crucial to target during therapy, and whether these or other methods of addressing conflict therapeutically are more effective than other approaches to reducing psychological distress.

Within the field of clinical psychology, it would also be interesting to investigate whether certain psychological experiences or difficulties are associated with specific conflicts or discrepancies, for example approach-avoidance conflicts might be frequently observed in anxiety (Mansell, 2005), and self-discrepancies might be implicated in depression (Hyland, 1987). The evidence in this review

certainly indicates that actual-ideal discrepancies are relevant for depression and related symptoms. This review has demonstrated that ambivalence over expressing emotion is clearly an important process, and thus conflict in the domain of emotion may be an important construct to consider, especially for disorders of emotion-regulation such as bipolar disorder (e.g., Mansell, Morrison, Reid, Lowens & Tai, 2007). Alternatively, conflict may represent a trans-diagnostic, core process. This possibility is certainly worthy of research attention, as there is burgeoning interest in trans-diagnostic psychological processes that may be amenable to psychotherapeutic change (Harvey, Watkins, Mansell & Shafran, 2004).

1.19. Limitations and considerations

Three limitations of the research reviewed here must be acknowledged. Firstly, a large proportion of the studies reviewed were conducted using student populations, although a number did utilise clinical and adult populations. Students tend to be young and as such generally have fewer burdens of responsibility, for example financial responsibilities, or child-care responsibilities (Baumeister & Bushman, 2007). Thus, it could be argued that the content of their goals differs to that of adult populations. However, there is no evidence to suggest that the kinds of conflicts reported by students are less significant and distressing than conflicts experienced by other groups. Secondly, it is likely that there has been some publication bias, notably in the area where the findings are mixed, the study of conflict between goals, plans and projects. Michalak et al. (2004) refer to two studies which failed to replicate the well-known Emmons and King (1988) finding that conflict, as assessed using the matrix method, related to well-being, neither of which have been published. Thus, it is possible that other studies have been conducted where the results do not replicate those presented in this review, but which could not

be included. Finally, a number of German language articles on the four concepts reviewed in this article could not be included because translations were not available. However, Michalak et al.'s (2004) review indicates that the results of these studies are in line with those reported here.

1.20. Concluding remarks

The empirical evidence is consistent with the assertion that all four components of the hierarchical model are important factors for psychological well-being, and that it is one which has implications for both improving our understanding of psychological distress and for the development of effective psychotherapeutic interventions. In summation, the present review suggests conflicting goals, ambivalent goals, and/ or discrepant senses of self impede well-being, whilst pursuing goals which help an individual achieve fundamental goals and needs promotes well-being. When individuals feel their sense of self does not match the person they feel they should be or want to be, and when they are striving for numerous things that demand the same time, energy and resources, that they have mixed motivations about succeeding in, and that do not fulfil their personal, most important needs, they are likely to feel distressed. This conclusion has obvious face validity and importantly, it is in accordance with clinical experience; patients seeking psychological therapy often seem in conflict, and recognising and resolving this conflict is an important part of their recovery. In order to test and develop the theoretical model proposed by this review and establish the interaction between the four processes described, researchers should now begin to address the research questions posed in this review and thus further our understanding of these motivational concepts and their relevance for clinical psychology.

The present thesis

1.21. Rationale

This thesis aimed to extend the literature discussed above and sought to answer a number of the unanswered questions highlighted above. A number of areas of study were identified as priorities for this thesis: attempting to account for inconsistent findings in the area of goal conflict; testing for interactions between different concepts; developing more implicit assessments of internal conflict; testing whether certain problems or difficulties were associated with internal conflict, particularly in the domain of emotion; focusing on goal pursuit processes that might make successful reorganisation of conflict more likely; considering whether conflict might be amendable to change, and exploring therapeutic interventions that might promote this change. The primary aims of this thesis were to: a) determine whether conflict has negative consequences, b) consider the role of conflict in emotion-regulation difficulties; c) consider concepts which might relate to the reorganisation or resolution of internal conflict and their relationship to well-being, and finally d) explore the utility of interventions which seek to assist with successful reorganisation of conflict in order to improve well-being.

Study 1 aimed to address the issue of inconsistent findings for the relationship between goal conflict and well being, a priority identified in the review. In the review and model, ambivalence is proposed to be a more implicit, high-level form of conflict, which is less conscious and thus more difficult to resolve, whilst goal conflict is proposed to be low-level conflict resulting from competition for time or resources. A key question identified by the review was whether conflict at different levels interacted to predict well-being. In addition, an interaction between goal conflict and ambivalence could explain the inconsistency between studies in

terms of the relationship between goal conflict and well-being, as in the studies reviewed the level of ambivalence about goals may have varied between samples. Thus, Study 1 (Chapter 2) tested the possibility that the interaction between goal conflict and ambivalence might predict symptoms of distress.

The review noted that whilst it has been argued that theoretically conflict is an important transdiagnostic concept in the understanding and amelioration of psychopathology (e.g., Carey, 2008; Mansell, 2005), there is a paucity of empirical research investigating whether conflict may underlie a range of different problems or difficulties. Study 2 and 3 sought to explore the role of conflict across a wide range of problems and difficulties. Conflict was studied with respect to goals for the expression or suppression of a range of both emotions and behaviours, as the research reviewed suggests that conflict over emotional expression may be especially relevant, and the role of conflict in behaviour has been understudied. Further, Study 2 and 3 addressed the need for more implicit assessments of conflict, by asking participants to report on the importance of their goals and reasons for and against expressing certain emotions and behaviours and assessing conflict indirectly.

The review highlighted a need for the consideration of the role of conflict in disorders of emotion-regulation, so two studies were conducted that explored the role of conflict in analogue bipolar symptoms and bipolar disorder (Study 4 and 5). A recent integrative-cognitive model (Mansell et al., 2007) proposed that extreme and conflicting cognitions and appraisals about the same mood states might drive conflicting emotion-regulation attempts, causing and maintaining mood swing symptoms. Thus, Studies 4 and 5 investigated conflict between individuals' beliefs about and appraisals of the consequences of mood states specifically.

Study 6 sought to investigate whether two goal pursuit concepts interacted to predict long-term changes in well-being; tenacious goal pursuit and flexible goal adjustment (Brandtstadter & Rothermund, 2002). One unanswered question is what makes conflict problematic, and it is suggested that the way individuals pursue goals will determine whether they can manage conflict when it arises and avoid long-term detriments to well-being. Whilst tenacity in goal pursuit might make successful goal pursuit more likely, when goal pursuit is interrupted by conflict or obstacles to goals, individuals who are tenacious but not flexible in their goal pursuit might continue to pursue a blocked goal and be unwilling to change or disengage from pursuing this goal. In contrast, whilst individuals who are highly flexible and not tenacious might be less likely to succeed in their goals, flexibility in goal pursuit may involve greater awareness and consideration of high-level, long-term goals, meaning high-level, long-term reorganisation may be more likely. Thus, it was expected that these two concepts would interact to predict long-term well-being.

A key question and priority for future research recognised in the review was whether internal conflict is amenable to change, and whether changing conflict through therapeutic means leads to improved well-being. Study 7 aimed to address this issue. As discussed above, control theory suggests awareness is necessary for the reorganisation of conflict. Thus, Study 7 explored an analogue therapeutic approach designed to help individuals explore conflicts and gain awareness of conflicting goals. The aim was to test whether ambivalence, or distress about ambivalence, could be resolved through expressive writing, and also to test whether the extent to which participants discussed conflict in their writing mediated improvements.

Finally, the review highlighted that it is important to assess whether therapeutic approaches that target conflict can help resolve conflict and reduce

distress. To begin to address this question, Study 8 was conducted. One therapeutic approach based explicitly on the principles of control theory is Method of Levels cognitive therapy (e.g., Carey, 2006). This approach seeks to encourage awareness of high-level goals and promote long-term reorganisation of conflict. This study sought to test whether greater adherence to treatment principles predicted change and symptom improvements between therapy sessions, as this would indicate that targeting conflict in this way is helpful in reducing distress.

1.22. Methodological approaches

The empirical studies in this thesis utilised a wide range of samples and methodologies, including cross-sectional, short-term follow-up and longitudinal designs, continuous and group comparison approaches, and samples of both young and old adults and both clinical and non-clinical groups. The rationale for the approach taken in each study to design, sampling, data collection, measurement and analysis will now be described.

*1.22.1. Measures and Samples.*⁴ Across all of the studies in this thesis, measures of clinical functioning and psychopathology were utilised, as this thesis sought to investigate the consequences of internal conflict in terms of clinically-relevant distress and difficulty. However, in a number of the empirical studies measures of psychological well-being were also used, in line with Keyes' (2002) argument that ill-being and well-being may not lie on the same continuum, and in answer to calls to focus on positive and negative aspects of well-being in understanding causes of distress (Wood & Tarrier, 2010). In addition to measures of overall psychological distress and well-being, Study 2 assessed participants' self reported difficulties managing each emotion and behaviour, whilst Study 3 sought to replicate and extend this study by including validated measures of psychopathology

in the specific emotional and behavioural domains studied. Finally, Study 6 also utilised a measure of physical ill-health, as it was expected that in the long-term, goal pursuit variables might impact considerably on a range of aspects of well-being and this might manifest as poorer physical health.

Studies 1 through 4 utilised student samples. This was deemed appropriate for a number of reasons. Firstly, the use of student samples is common when research seeks to provide initial evidence for an effect that can then be explored in further research using clinical samples or different age groups. Secondly, these studies sought to explore determinants of psychological distress and psychopathology, and an advantage of using student samples for this purpose is that the type or severity of psychological distress varies widely between individuals, meaning that continuous approaches and methods of data analysis can be used. Given the acknowledged continua of mental well-being and mental ill-being, (e.g., Keyes, 2002) this was deemed important. Thirdly, using analogue samples permitted the recruitment of larger numbers of participants, which provided greater power for the detection of interaction effects. Fourthly, many of the student participants in the analogue studies in this thesis met conventional criteria for clinically significant distress, suggesting that results from these studies would generalise to individuals experiencing clinically significant distress. Finally, as discussed in the review, there is no evidence to suggest that the variables of interest in this thesis vary systematically between students and other groups, and there is no reason to assume that conflict is more or less detrimental for students than for other groups.

The use of a non-clinical, analogue sample was deemed particularly appropriate for Study 4 because of the acknowledged continuum of hypomanic and depressive experiences (e.g., Angst, 1998), and the fact that the variables of interest

(extreme and conflicting appraisals of mood states) were adapted from a model of the continuum of mood swings (Mansell et al., 2007). Further, the study involved exploring variables uniquely associated with depression and hypomania symptoms, and analysis of symptoms in an analogue sample the testing of predictors of the each type of symptoms, whilst controlling for the other type of symptoms. As discussed above, exploring variables associated with these two types of symptom in a continuous manner avoided the use of arbitrary 'cut-off' points to determine the presence or absence of distress.

However, the other studies in this thesis utilised non-student samples. Study 6 utilised an older adult sample, because the variables of interest, which related to the way individuals cope with obstacles to goal pursuit, might be especially important for well-being in older age given the range of obstacles that present themselves to the pursuit of important goals in later life, including changes in functioning and financial circumstances (e.g., Lerner, Freedheim & Weiner, 2003). Study 5 utilised an adult sample of individuals with bipolar disorder, unipolar depression, and no clinical diagnosis. This enabled the testing of whether the presence of opposing appraisals about the same states discriminated bipolar disorder, a disorder of mood swings, from unipolar depression, characterised by extreme low mood symptoms but not by mood swings, and from a control group, in order to establish whether the presence of conflicting appraisals was a unique feature of bipolar disorder. The rationale for investigating conflict in the context of bipolar disorder was that firstly, the review emphasised the detrimental impact of conflict in the context of emotion; and secondly, that whilst a recent cognitive model of bipolar disorder had proposed that conflict might be central in maintaining mood swing symptoms, no study had demonstrated empirically the presence of conflict in

individuals with bipolar disorder (Mansell et al., 2007). In Study 8, a sample of individuals referred for psychological therapy in a National Health Service Primary Care Service was recruited. Whilst the sample in this study was fairly small, the naturalistic setting increases the generalisability of the findings. Further, the individuals recruited were experiencing a range of clinically-significant presenting problems and the severity of their distress varied widely, meaning that any conclusions drawn from this research would not be restricted to a limited, homogenous population but rather may generalise across a spectrum of mental ill-health.

1.22.2. *Design.* Studies 1 through 5 utilised cross-sectional designs. A cross-sectional approach was deemed appropriate as these studies were interested in whether conflict at a specific time point related to distress (Study 1), problems regulating emotions and behaviour (Study 2 and 3) and psychopathology (Study 4 and 5) at that same time point. It was thought that the extent to which multiple goals or beliefs held *simultaneously* were conflicting would impact on individuals' *current* difficulties, which would then impact on their reports of their *current* experiences of distress, problems managing emotions and behaviour, and psychopathology. Other factors were expected to determine changes in these outcomes over time and these factors were the focus of the later studies in this thesis which adopted longitudinal approaches.

Study 6 utilised a longitudinal approach, with an extended follow-up period of 10 years. This permitted the testing of causal effects, and allowed for the testing of whether concepts predicted long-term well-being and health. This was deemed important, as the focus was on modes of pursuing and adjusting one's goals over time, and these modes were thought more likely to impact on long-term well-being

than current well-being or symptomatology. It was thought that goal pursuit processes might be important in managing goal conflict and obstacles to goal pursuit over long time periods and in avoiding the long-term detriments said to result from chronic, unresolved conflict (Powers, 1973).

In the two intervention studies, a longitudinal approach was taken. In Study 7, this enabled the testing of whether the intervention impacted on different variables and effects were maintained at follow-up. In Study 8, data was collected over a period of 1 ½ years, and a session-by-session approach to analysis was taken, in order to establish whether certain variables predicted change in other variables between sessions.

1.22.3. Data collection. In this thesis, a range of data collection methods were used. For a number of empirical studies in this thesis, data was collected for the purpose of testing certain questions using either online or paper-based survey methods, or face-to-face data collection (Study 1 through 3, Study 7, Study 8). This allowed the measures and methods to be specifically selected for the purpose of the study. For two of the studies, pre-existing datasets from previous studies using measures and samples of interest were merged to create larger datasets (Study 4 and 5), providing greater power and improved reliability. Finally, one study used a publically available online database containing data on a wide range of variables at numerous time points. Not only did this provide a much larger sample than would have otherwise been possible to recruit, the specific aim of this study was to explore long-term effects, and this pre-existing database permitted analysis of effects over a 10-year period, which would usually be beyond the scope of a Doctoral-level research project.

In addition to providing variety and permitting a range of analyses to be conducted, the approach to data collection taken in this thesis allowed the thesis author to develop a wide range of research skills, for example, an ability to work with large datasets, knowledge about monitoring participant flow and drop-out in longitudinal datasets, and confidence in utilising more complex statistical approaches including hierarchical regression, multi-level modelling, mediation and moderation analysis.

1.22.4. Interventions. In this thesis, whilst Studies 1 to 6 investigated the effects of conflict concepts on outcomes including psychological distress and well-being, two studies sought to explore the amenability of conflict concepts to change and intervention. The intervention in Study 7 was an adapted expressive writing paradigm, where participants were asked to write about an ambivalent conflict. Studies have previously demonstrated that writing about life goals has health benefits (King, 2001), and it was expected that writing about other goal-related concepts might also confer benefits. The review and model in this thesis proposes that ambivalence involves conflict between goals at higher levels in the hierarchy that might be out of awareness. Thus, it was thought that writing about ambivalence might increase individuals' awareness of the goals and conflict underlying the ambivalence, and help individuals to reorganise and resolve the conflict to reduce their distress.

Study 8, the final study in this thesis, involved a therapeutic approach directly based on the principles of Control Theory. A number of suggestions for psychological therapies can be inferred from the principles of Control Theory including creating an environment of low interpersonal control, where the client's own control is prioritised and open-ended and shared goals are promoted (Mansell,

2005). In addition, to encourage the resolution of goal conflicts, therapeutic approaches should harness the process of ‘reorganisation’, a change process within a goal hierarchy, which requires individuals’ attention to be sustained on the high-level goals in the hierarchy that are creating the conflict (Powers, 1973, 1998). In order to this, therapists should strive to direct individuals’ awareness to higher level goals. One form of psychological therapy based upon these suggestions is Method of Levels (MOL) cognitive therapy (e.g., Carey, 2006, 2008), and this was the intervention used in Study 8.

Studying therapeutic approaches enabled the testing of the hypothetical clinical implications of the research findings empirically and also made it possible to consider the applicability of the research in this thesis to practice. Further, the author of this thesis provided one-to-one psychological therapy to participants in Study 8, and this practical experience enhanced knowledge and understanding of the links between the theoretical perspective taken in this thesis, the therapeutic approach, and real-world clinical practice.

1.22.5. Assessments. In this thesis, a number of methods of assessing internal conflict were used, including existing, validated assessments, novel and implicit methods, and inferential methods. Study 1 and 7 utilised the existing, validated assessments of goal conflict and goal ambivalence (Emmons & King, 1988). In Study 7, the ambivalence measure was used as individuals could complete it with respect to each individual goal, and then select the most ambivalent goal to be the focus of their expressive writing sessions. In Study 1, these assessments were used because this study sought to explain inconsistency in previous research using this measure of goal conflict. In addition, these measures of goal conflict and ambivalence were used because in exploring interactions between conflict concepts

said to be situated at different levels within a goal hierarchy, it was deemed important to utilise two assessment methods that could be completed with respect to the same set of goals.

Study 2 and 3 utilised novel assessments of internal conflict in emotional and behavioural domains, and explored associations between conflict and problems in each emotional and behavioural domain. Conflict was studied in the context of clinically-relevant emotional and behavioural domains as a common factor across a range of common psychological problems such as anxiety disorders or eating problems is the dysregulation of everyday emotions and behaviours. The conflict assessment in these studies was purposefully designed to target high-level goals, by asking individuals for the reasons *why* they seek to control emotions or behaviours in specific ways. Control theory would suggest that the reasons why individuals control certain quantities or experiences in certain ways represent higher-level goals, whilst how they control these quantities or experiences represent low-level goals (e.g., Carey, 2006). The novel method utilised in these two studies involved assessing conflict implicitly, as the review suggested that if individuals were aware of internal conflict; as they would need to be to report on it in a research study; this conflict would be unlikely to persist and lead to difficulty. In this study, the presence of highly important goals to express or perform emotions or behaviours *and* highly important goals to suppress or inhibit the same emotions and behaviours indicated conflict, as it indicated that individuals had opposing, highly important goals for the control of the same emotion or behaviour.

Studies 4 and 5 assessed conflict between beliefs and appraisals of mood states in relation to a specific, clinical example of a psychological disorder characterised by emotion-regulation difficulties; bipolar disorder. This form of

conflict has been said to be particularly relevant for bipolar disorder, as the way individuals appraise mood and internal states is likely to influence the way in which they attempt to control or regulate these states (Mansell et al., 2007). A pre-existing, validated assessment of these beliefs and appraisals was used, but positive and negative appraisals of the same mood states were deliberately selected, and as in Study 2 and 3, the endorsement of both positive appraisals and negative appraisals of the same mood states indicated conflict, as it indicated that individuals appraised the same mood states in opposing or conflicting ways.

Studies 6 and 8 did not involve directly assessing internal conflict, but focused on concepts which might relate to the reorganisation of conflict. Study 6 utilised brief assessments of goal pursuit processes which were expected to impact upon long-term well-being. The measures used had previously been validated and been found to relate to well-being in both young and older adults (e.g., Brandstadter & Renner, 1990). Study 8 used a series of measures of concepts that might predict psychotherapeutic change, including an assessment of therapist adherence to the therapy, a measure of client readiness to engage in the therapy, and previously validated measures of working alliance. These variables were assessed in order to establish whether the variables of interest predicted therapeutic change even when controlling for variables previously argued to be important in predicting improvement in therapy.

1.22.6. Analysis. Finally, across the empirical studies in this thesis there were a range of approaches to data analysis. In Study 1, multiple linear regression analysis was used to test predictors of symptoms, and moderation analysis (Aiken & West, 1991) was used to test whether the interaction between conflict and ambivalence independently related to symptoms. A single-level approach was taken to analysis, as

the aim was to consider whether the person-level variables of overall conflict and ambivalence predicted the person-level variable of psychological distress, rather than test effects of goal-level conflict or ambivalence on goal-level outcomes such as goal achievement.

In Study 2 and 3, in order to test the possibility that conflict might represent a ‘transdiagnostic’ concept, underlying a range of manifestations of distress (e.g., Mansell, 2005), this study tested whether potential associations between conflict and problems were specific to specific domains or held across a number of clinically-relevant emotions and behaviours. Hierarchical linear modelling (multi-level modelling) was used to analyse the data, because of its two-level structure consisting of multiple responses from the same individuals to the same questions about different emotional and behavioural domains. A multi-level approach also provided greater statistical power.

In Study 4, multiple, linear regression analyses tested whether different sets of opposing or conflicting appraisals independently predicted different mood symptoms. In order to establish whether different types of appraisals were uniquely associated with different mood symptoms (high mood and low mood), each regression model predicted one symptom subscale score whilst controlling for the other symptom subscale score as a covariate.

Study 5 aimed to discriminate the groups rather than predict symptoms in a continuous fashion, and so binary, logistic regression was used to test whether the categories of appraisals in the HAPPI scale discriminated individuals with bipolar disorder from individuals with unipolar depression and controls. Whilst continuous approaches are often advocated for this kind of research, this study sought to establish whether the presence of conflicting appraisals was a unique feature of

bipolar disorder, by testing whether it differentiated individuals with a mood swing disorder (bipolar disorder) from individuals with a mood disorder (depression) and individuals with no disorder, and so this categorical approach was necessary.

Moderation analysis (Aiken & West, 1991) was used to test the interaction between positive and negative appraisals, and the interaction effects were graphed to explore whether the coexistence of opposing appraisals predicted bipolar disorder.

Study 6 assessed predictors of changes in well-being over time, and so multiple linear regression analysis was used to predict symptoms at follow-up, entering symptoms at Time 1 into the regression as a covariate, in line with Zapf, Dormann and Freses' (1996) recommendations. Moderation analysis (Aiken & West, 1991) was used to test the interaction between flexibility and tenacity.

In order to test the utility of the intervention in Study 7, symptoms of distress, ambivalence, and distress about ambivalence were assessed at baseline and follow-up, and the conflict expressive writing group was compared to a control group on these measures. An Analysis of Covariance (ANCOVA) was used to compare the experimental and control groups in terms of their distress and ambivalence at follow-up, controlling for these variables at baseline. Each writing script from each participant was also rated by two independent raters for the number of descriptions of conflict in the writing. The original aim of this analysis was to explore a potential mediating effect of the extent that participants discussed conflict on outcomes, and this analysis also served as a manipulation check.

Finally, in Study 8 data was analysed in a multi-level fashion, using hierarchical linear modelling (multi-level modelling). This allowed the testing of predictors of symptoms at 'session n+1' from the variables as measured at 'session n' and controlling for symptoms at 'session n' (Zapf et al., 1996), across a number of

sessions for each participant. This multi-level, session-by-session approach to data analysis increased the power of the analyses to detect changes in symptoms.

1.23. Aims and hypotheses

The central aims of this thesis were to: a) determine whether internal conflict has negative consequences; b) consider conflict in the context of emotion-regulation difficulties; c) investigate concepts which might relate to the reorganisation of conflict; and d) explore the utility of interventions which seek to direct the process of reorganisation or change toward high-level, long-term goals. Eight empirical studies were conducted to fulfil these aims.

Five distinct, novel hypotheses were tested by the empirical studies:

1. High and low-level goal conflict would interact to predict distress (Study 1);
2. Conflict between high-level goals for emotions and behaviours would relate to problems regulating emotions and behaviours and symptoms of psychopathology, and this effect would apply across a range of emotional and behavioural domains (Study 2 and 3);
3. High and low mood would be characterised by opposing sets of cognitions about the same mood states, and bipolar disorder would be characterised by the presence of both opposing or conflicting sets of cognitions about mood (Study 4 and 5);
4. The interaction between two modes of coping with conflict, flexibility and tenacity in goal pursuit, would predict long-term well-being (Study 6);
5. Therapeutic and analogue therapeutic approaches which seek to direct individuals' attention to high level goals would be useful in reducing distress (Study 7 and 8).

1.24. Ethical approval

Studies 1 to 4 and Study 7 were approved by the School of Psychological Sciences Research Ethics Committee, at the University of Manchester. The data in

Study 5 was collated from different studies for the purpose of these novel analyses, and the data collection for these studies was approved by the relevant local NHS Research and Development. Study 6 involved analysis of data from the Wisconsin Longitudinal Study (WLS) of the University of Wisconsin-Madison. Study 8 was approved by Salford Primary Care Trust NHS Research and Development.

Footnotes

1. Other approaches have considered specific forms of conflict, for example role conflict or work-life conflict. However, we were interested in research focusing on conflict between participants' own personal goals and senses of self, rather than pre-defined roles in life.
2. Another measure of ambivalence is the Intense Ambivalence Scale, but this does not assess motivational ambivalence as a type of goal-conflict and so is not included here.
3. Numerous German language articles have been written on the subject of goal conflict, which cannot be included in this review because English translations were not available. Michalak et al.'s (2004) review comments on some of these German language articles.
4. Where they do not appear in the relevant chapters, descriptive statistics for each study can be found in Appendices 1 – 6.

CHAPTER 2: GOAL CONFLICT AND AMBIALENCE INTERACT TO PREDICT DEPRESSION

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Abstract

Research has found inconsistent relationships between goal conflict and distress. In the present research, the interaction of conflict between goals and ambivalence about goals was a significant predictor of depression symptoms in 120 students.

Depression symptoms were highest in individuals with low levels of conflict and high levels of ambivalence. Considering the interaction between goal conflict and psychological distress reveals a new interpretation of their relationship with psychological distress. It is concluded that ambivalence is most distressing when individuals' goals do not make conflicting demands on resources, as this ambivalence is likely to result from deeper-rooted, less conscious motivational conflict.

Keywords: goal conflict; ambivalence; depression; interaction

Introduction

Conflict between goals refers to situations when pursuit of one goal undermines pursuit of another (Segerstrom & Solberg Nes, 2006). Many people find that their goals are constantly in conflict; any time a person holds multiple goals these goals can interfere with one another. Ambivalence (Bleuler, 1911) refers to contradictory feelings directed toward the same target, conceptualised as approach-avoidance conflict (Sincoff, 1990), or within-striving conflict (Emmons & King, 1988). Ambivalence can be inferred when an individual is consciously pursuing a certain goal, despite believing they would be unhappy if they succeeded in it. Goal conflict and ambivalence are important concepts in the study of psychopathology. It has been argued that “the development and maintenance of clinically relevant symptoms are largely determined by personal conflict” (Renner & Leibetseder, 2000, p. 321). In addition, ambivalence is a major concept in both traditional and contemporary psychoanalysis (Sincoff, 1990).

Empirical research has linked goal conflict with psychological distress (Emmons, 1986; Emmons & King, 1988; Palys & Little, 1983; Riediger & Freund, 2004), and found a relationship between ambivalence and distress (Emmons, 1986; Emmons & King, 1988). However, a number of studies have failed to replicate a relationship between conflict and distress (Kehr, 2003; Romero et al., 2009; Segerstrom & Solberg-Nes, 2006; Wallenius, 2000); and between ambivalence and distress (Romero et al., 2009). The empirical picture of the relationship between goal conflict, ambivalence and psychological well being is therefore unclear. It is likely that the relationship between these variables and distress is more complicated; there may be, for example, an interaction effect.

It is unlikely that goal conflict alone causes significant distress. Goal conflict can occur whenever there are multiple demands on the same resource, but individuals can extend their resources, or accept conflict as a consequence of pursuing their goals (Riediger & Freund, 2004). Segerstrom and Solberg Nes (2006) argue that the negative effects of conflict are offset by the benefits of engaging with important goals. Ambivalence, however, may be more distressing. In Bleuler's (1911) definition, 'emotional ambivalence', which is less conscious and involves an internal battle, is more pathological than 'voluntary ambivalence' about doing one thing versus another (Sincoff, 1990).

The distressing effects of ambivalence may depend on the extent to which individuals are in conflict, or vice versa. This may explain varying results in previous studies; levels of ambivalence or conflict may have differed across samples. The present study is the first empirical study to test whether goal conflict and ambivalence interact to predict symptoms.

Goal conflict and ambivalence may affect goal-level variables, and other studies have taken a multi-level approach to analyse these effects. The aim of this study was to investigate the effects of conflict and ambivalence on distress, and so the present study utilises a person-level approach.

Method

2.1. Materials

The *Depression, Anxiety and Stress Scale (DASS-21)* (Lovibond & Lovibond, 1995): A 21-item measure of symptoms of stress, anxiety and depression.

Participants rated their agreement with statements such as "I found it difficult to relax" on a scale of 0, "did not apply to me at all", to 3, "applied to me very much/most of the time". The scale has 2-week test-retest reliability coefficients of $r = .71$,

.78 and .81 for the depression, anxiety and stress subscales respectively. The depression subscale correlates with the Beck Depression Inventory ($r = .79$) and the anxiety subscale correlates with the Beck Anxiety Inventory ($r = .85$) (Anthony, Bieling, Cox, Enns & Swinton, 1998). In this study $\alpha = .85$, .68 and .81 for the depression, anxiety and stress subscales respectively.

Strivings Instrumentality Matrix (SIM, 10x10 version) (Emmons & King, 1988): A matrix designed to assess conflict between goals. The SIM was found to have acceptable 1-year test-retest reliability of $r = .58$, and SIM conflict correlated with negative affect ($r = .28$), somatisation ($r = .28$), anxiety ($r = .29$) and depression ($r = .34$) (Emmons & King, 1988).

Ambivalence (Emmons & King, 1988): Participants were asked about each goal; “how unhappy would you be if you succeeded at this striving”, on a scale of 0, “not unhappy at all”, to 5, “extremely unhappy”. This measure of ambivalence was found to have a 1-year test-retest reliability of $r = .65$, and to correlate with anxiety ($r = .37$) and depression ($r = .44$) (Emmons & King, 1988).

2.2. Participants and procedure

Participants (120, 98 female) with an average age of 19.84 ($SD = 2.93$) completed the DASS-21, followed by the SIM and ambivalence measure. Participants generated ten personal goals, defined as “things you typically attempt to achieve or attain, or typically attempt to avoid doing”. Participants used the matrix to systematically consider each pair of goals in turn, recording their ratings of the relationship between each pair of their listed goals, from -2, “very harmful”, to 2, “very helpful” in each cell of the matrix. This method made it possible to calculate the overall amount of perceived conflict amongst each participant’s personally generated set of goals. Participants also rated how ambivalent they were about each

goal. Participants' conflict ratings were reversed so that higher scores indicated higher conflict.

Results

Mean goal conflict correlated positively with mean goal ambivalence, but not with the DASS symptom subscales. Ambivalence was significantly positively correlated with anxiety, stress and total symptoms and the correlation between ambivalence and depression was approaching significance ($r = .18, p = .05$) (see Table 2.1). The mean goal conflict score was 2.84 ($SD = .35$), indicating that on average participants' goals had a slightly positive effect on one another.

Table 2.1.

Correlations between variables

	Ambivalence	Conflict	DASS-21	Depression	Anxiety	Stress
Ambivalence	1	.26**	.22**	.18	.19*	.20*
Conflict	.26**	1	-.054	-.11	.007	-.018

Note. * $p < 0.05$ ** $p < 0.01$

The analyses were single-level, as the dependent variable of symptoms is at the person-level, and this study contained no dependent variables at the goal-level. Therefore, means for goal conflict and goal ambivalence were calculated for each individual's set of goals, rather than for each goal. Mean goal conflict and mean goal ambivalence were then standardised, and the interaction term was calculated by multiplying these variables together. Regression Analyses were conducted on overall distress, and the three symptom subscales. Mean goal ambivalence and goal conflict were entered in the first step, and the interaction term was entered in the second step. The results of these analyses are shown in Table 2.2.

Table 2.2.

Results of multiple regression analyses

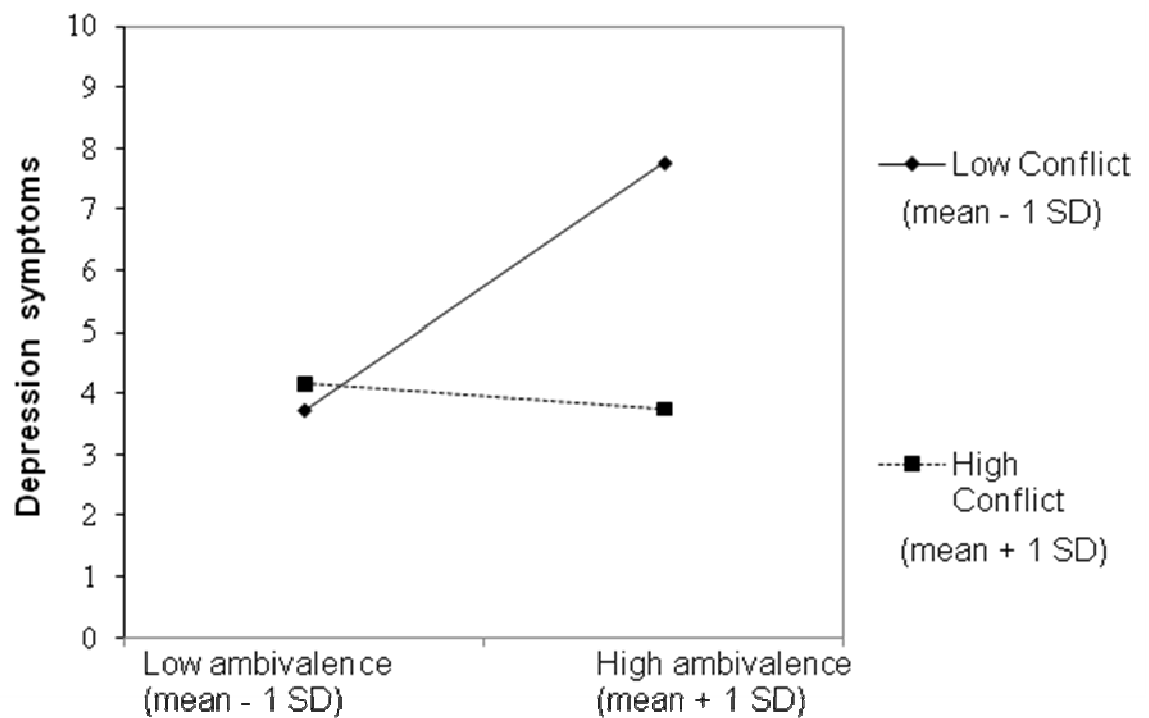
	Model	F (df)	R ²	Ambivalence		Conflict		Ambivalence x Conflict Interaction	
				<i>B; beta</i>	<i>P</i>	<i>B; beta</i>	<i>p</i>	<i>B; beta</i>	<i>p</i>
Overall Distress	1	3.71 (2,119)*	.06	2.53; .25	.01**	-1.20; -.12	.21		
	2	3.54 (3, 119)*	.08	2.44; .24	.01*	-1.44; -.14	.13	-1.78; -.16	.08
		R ² change	.02						
Depression	1	3.61 (2,119)*	.06	.96; .22	.02*	-.74; -.17	.07		
	2	4.79 (3, 119)**	.11	.91; .21	.02*	-.89; -.20	.03*	-1.12; -.23	.01*
		R ² change	.05*						
Stress	1	2.75 (2,119)	.05	.96; .22	.02*	-.33; -.08	.43		
	2	2.55 (3, 119)	.06	.93; .21	.03*	-.41; -.09	.32	-.64; -.13	.15
		R ² change	.02						
Anxiety	1	2.28 (2,119)	.04	.61; .20	.04*	-.14; -.05	.64		
	2	1.51 (3, 119)	.04	.60; .20	.04*	-.14; -.05	.63	-.027; -.01	.93
		R ² change	.00						

Note. * $p < .05$ ** $p < .01$ Significant effects are in bold.

Ambivalence significantly predicted overall distress ($b = .25, p = .01$), depression symptoms ($b = .21, p = .02$), anxiety symptoms ($b = .20, p = .04$) and stress symptoms ($b = .21, p = .03$). Conflict significantly negatively predicted depression symptoms ($b = -.20, p = .03$). The interaction between conflict and ambivalence was a significant predictor of depression symptoms ($b = -.23, p = .01$). Figure 2.1 shows that depression symptoms were most elevated when ambivalence was high and conflict was low.

Figure 2.1.

The interaction effect of goal conflict and ambivalence on depression symptoms



2.3. Robustness analyses

Two raters independently coded participants' goals as either high or low level.¹ Goal level was defined and operationalised in line with Wallenius (2000). High-level projects were abstract 'being' goals, including goals relating to relationships, values, and internal states (moods, motives, and thoughts). Examples

included ‘become more independent’, ‘be less anxious’ and ‘be positive’.² Low-level projects were more concrete, specific and behavioural ‘doing’ goals. Examples included ‘get better grades in coursework’ and ‘spend time with family’. In this study Cohen’s $\kappa=.69$, $p<.000$, indicating good inter-rater agreement (Altman, 1991). Given the categorical nature of the coding, it was not possible to perform analyses using the mean of the two ratings, so the ratings of the first author were used.

The majority of participants’ goals were low level (89.2%). In line with Wallenius (2000), conflict was significantly lower ($t = -2.35$, $p = .02$) for high level goals ($M = 2.49$) than low level goals ($M = 2.89$), and ambivalence was significantly lower ($t = -5.44$, $p < .000$) for high level goals ($M = 1.55$) than for low level goals ($M = 2.06$). The number of high level goals participants listed correlated with anxiety ($r = .28$, $p = .03$) symptoms, but not more depression or stress symptoms. However, given the low proportion of high level goals, these findings should be interpreted with caution. Regression analyses on DASS symptoms revealed no significant interactions between goal level, conflict and ambivalence.

Discussion

The present research offers a new account of how conflict and ambivalence contribute to depression; the amount of conflict between individuals’ goals interacts with the amount of ambivalence individuals have about their goals to predict symptoms of depression. Depression symptoms were highest when there was high goal ambivalence and low goal conflict. This paper proposes that ambivalence is especially detrimental in the absence of goal conflict, whilst conflict appears to have a protective effect for depression.

It is proposed that when individuals' goals are in conflict, feelings of ambivalence result from pursuing one goal at the expense of another, and thus can be understood and are less distressing. For example, an individual who has goals which conflict in terms of their demands on time, for example wanting to spend time with family, complete work assignments, and go to the gym regularly, might feel ambivalent about completing the assignment or about attending the gym because he knows this will be at the expense of the other goals, but accept this as a consequence of pursuing numerous important goals. However, individuals who feel ambivalent about pursuing their goals despite their goals not conflicting with one another are likely to be less conscious of the reasons for this ambivalence; the ambivalence might be resulting from a deeper-rooted motivational conflict. For example, an individual who feels ambivalent about their goals of staying at home to care for their child and keeping their home clean and tidy, but has plenty of time to do both, might feel distressed because they do not understand why they feel ambivalent. They may feel resentful at a deeper level that they had to give up a flourishing career, but not being fully aware of this reason prevents resolution of the ambivalence, and manifests as feeling unhappy and unfulfilled.

Goal conflict did not independently correlate with distress. Surprisingly, *lower* levels of conflict predicted depression symptoms specifically when ambivalence was moderate or high. Depression is characterised by lower levels of approach motivation (Dickson & Macleod, 2004). Conflict between goals presumably indicates pursuit of multiple, valued goals, which might render individuals less vulnerable to depression.

Ambivalence did independently correlate with symptoms of distress, suggesting that ambivalence may be more pathological than conscious conflict,

supporting Wallenius' (2000) argument that the effects of conflict depend on the hierarchical nature of goals. Control theory suggests that goals exist in a hierarchy, with more self-definitional goals at higher-levels (Carver & Scheier, 1982; Powers, 1973). Goal conflict at higher levels is thought to be more detrimental to well being (Emmons, 1999; Mansell, 2005; Powers, 1973). In addition, high-level goals are less likely to become conscious in the course of everyday behaviour (Carver & Scheier, 1982; Emmons, 1999). Ambivalence may represent conflict at a higher and less conscious level in a hierarchy of personal goals; a person might have opposing desires relating to a goal, one to pursue it and one not to pursue it (Emmons & King, 1988). An individual who feels ambivalent about a 'low-level' goal may feel this way because 'high-level' motives relating to the goal are conflicted. For example, a woman who feels ambivalent about the goal of 'trying for a baby' may feel this way because her goals to 'please my parents' and 'be independent' drive her in opposing directions when it comes to deciding whether to pursue the goal. Thus, the woman might try to get pregnant, but feel unhappy about the prospect of succeeding. Future research could test this theoretical possibility that ambivalence represents high level conflict, as the range of goals obtained in the present research did not enable analyses to be conducted to establish this relationship. However, this would be a challenge for research; if high-level unconscious conflicts underlie ambivalence they may not be amenable to consciousness. Furthermore, the interaction effect in the present research suggests ambivalence is most problematic when conflict between concrete goals is low.

The regression models did not predict anxiety or stress symptoms. It is likely that different motivational processes contribute to different manifestations of distress. Individuals with depression tend to think in more abstract, high-level ways

(Watkins, 2008). If ambivalence does represent conflict at higher, more abstract levels in a hierarchy, then this might explain why whilst conflict is protective, ambivalence predicts depression. In contrast, anxiety may be more likely to be characterised by avoidance motivation (Mansell, 2005), whilst stress may result from interruptions or difficulties in goal progress. Alternatively, the effects of conflict and ambivalence on different forms of distress could be mediated by goal progress, as research suggests ambivalence might lead to both negative affect and lack of goal progress (Gebhardt, 2007). These are empirical questions for future research.

It is acknowledged that the cross-sectional design and self-report outcome measures are limitations of this study. However, the key outcome measure converges with clinician ratings. In addition, participants could list only ten goals, which may have been restrictive or forced individuals to generate more goals than they would otherwise list. However, numerous conflict studies have truncated the number of goals listed by participants. Prospective or longitudinal research would establish the direction of the relationships between goal conflict, ambivalence and distress, and their temporal stability. It would also be useful to consider alternative methods for measuring goal conflict and ambivalence. Future research would benefit from explicitly considering the interaction between conflict and ambivalence.

The present research suggests that conflict and ambivalence interact to predict depression. This may account for discrepancies in previous studies, as analyses were conducted which treated conflict and ambivalence as independent predictors of distress, and thus results depended on how ‘ambivalent’ or ‘conflicted’ the samples were. The finding that goal conflict did not independently relate to distress is in line with other studies which treated conflict as a low-level phenomenon caused by practical incompatibility (Wallenius, 2000) and conflicting

resource demands (Riediger & Freund, 2004). The level of goals pursued by participants might also explain some discrepancies. In Emmons and King's (1988) seminal study, which did find a relationship between conflict and distress, participants generated apparently more high-level goals, for example, relating to emotion regulation. Further, Wallenius (2000) found that individuals who listed more high-level, abstract projects were more distressed. This supports the hypothesis that conflict at higher-levels is more distressing.

Footnotes

1. Analysis of goal level was not initially a primary research question. These analyses were performed on a subset of the sample ($n = 60$), who had given consent for their goal lists to be retained and analysed.
2. A number of terms are used to describe superordinate goals (high-level, deep, and abstract), and to describe subordinate goals (low-level and concrete).

**CHAPTER 3: SUPPRESSION RELATES TO PSYCHOLOGICAL DISTRESS
ACROSS SIX EMOTIONAL AND BEHAVIOURAL DOMAINS WHEN IT
INVOLVES CONFLICT WITH IMPORTANT GOALS**

Rebecca E. Kelly

Miriam Samad

Warren Mansell

Alex M. Wood

Abstract

Suppression, a commonly cited maladaptive process, may be problematic when it involves conflict with other important goals. Two studies tested this hypothesis. In Study 1, 193 individuals rated the importance of their goals to express and suppress emotions and behaviour in six clinically-relevant domains: anger, anxiety, excitement, eating, drinking alcohol, and spending. Individuals also rated the extent to which they experience problems managing each emotion and behaviour. In Study 2, 73 individuals completed the same task along with measures of clinically-relevant distress in each domain. Multi-level analyses revealed that highly important goals for suppression related to problems managing emotions and behaviour (Study 1 & 2) and symptoms of psychopathology (Study 2) when expression goals were also rated as highly important, across all six emotional and behavioural domains. It was concluded that internal conflict may underlie the negative effects of suppression. This 'cross-domain' mechanism may represent an important transdiagnostic concept.

Keywords: goals; conflict; suppression; emotion; behaviour; transdiagnostic.

Introduction

Emotion suppression is the control or inhibition of the way that felt emotions are shown or revealed (Gross & Levenson, 1993). Suppression involves decreasing outward signs of emotions without necessarily affecting the internal experience (Gross, 1998). Individuals can also suppress their actions or behaviour, and this is generally referred to as behavioural inhibition (Polivy, 1998). Existing research, which will be summarised below, suggests that both forms of suppression have negative effects. However, it is proposed that suppression may not be maladaptive per se, but rather may only have negative consequences if individuals hold opposing and important goals for expressing or performing the emotion or behaviour.

Suppression is fast becoming a fundamental concept in psychopathology. There is a growing body of evidence that suppressing emotions and feelings leads to negative consequences for well-being. Individuals who tend to suppress their feelings tend to experience less positive affect and more negative affect, have worse interpersonal functioning, and experience lower well-being (Gross & John, 2003). Suppression also has 'ironic' effects; the suppression of certain experiences paradoxically serves to increase the frequency or intensity of the experience (Gross, 1998). In experimental research, it has been shown that efforts to suppress negative emotional responses to personally-relevant stimuli leads to ironic increases in negative affect in those already high in negative affect (Daggleish, Yiend, Schweizer & Dunn, 2009), leading the authors to conclude that emotional suppression may exacerbate or maintain emotional problems.

The suppression or inhibition of behaviour has also been found to have negative consequences. Behavioural inhibition is effortful and demanding, and individuals often fail to successfully inhibit these behaviours (Polivy, 1998). The

inhibition of behaviours has also been found to have similar negative consequences to emotional suppression, including increases in negative affect (Polivy, 1998). The effects of behavioural suppression or inhibition have been most widely explored with relation to eating. The rigid control of eating has been related to eating problems (Westenhoefer, Broeckmann, Münch & Pudel, 1994), and eating suppression attempts can also have counter-intentional effects when self-regulatory resources are low (Hofmann, Rauch & Gawronski, 2007).

Thus, the suppression of emotions and behaviour has a range of negative consequences including negative affect, demands on resources, and ironic effects of emotional or behavioural excess, and these effects seem to apply across a range of emotions and behaviours. There has been a surge of interest in transdiagnostic approaches to the understanding and treatment of psychological difficulties (Harvey et al., 2004), and suppression might represent one such transdiagnostic concept, given that a range of psychological problems involve difficulties managing particular emotions and behaviour.

Despite the volume of research into suppression and inhibition, the mechanism through which suppression causes negative consequences is unclear. Koole (2009) describes a number of contexts when emotion-regulation can engender internal conflict, for example between desires to attain short- versus long-term gains, or between the desire to experience or avoid experiencing emotions and the need to experience or avoid experiencing emotions in order to achieve certain goals. Suppression involves conflict between the desire to suppress, which is often externally motivated, and the inherent motive to perform the behaviour in question (Polivy, 1998). Thus, it is proposed that it is the conflict involved in suppression that determines its negative effects.

It has been suggested that if suppression is easy and the rewards are apparent, conflict will be resolved in favour of suppression, and the outcome may be positive, but if the behaviour is desirable or the rewards of suppression are unclear, then suppression would be more difficult, involve more conflict, and lead to negative outcomes (Polivy, 1998). For example, striving to suppress feelings of anger in order to avoid confrontation may only be maladaptive if the individual's reasons or goals for expressing their anger, for example, to be assertive, are perceived to be highly important. This individual might experience difficulties managing their anger because when goals are in conflict, pursuit of one goal undermines pursuit of the other (Segerstrom & Solberg Nes, 2006), and thus the person oscillates between striving to attain one goal and then the next and struggles to maintain control.

In line with this, Kashdan, Barrios, Forsyth and Steger (2005), propose that suppression and avoidance behaviour can be adaptive, for example, when trying not to show anxiety in a job interview in order to appear competent, and argue that controlling one's emotions and behaviours in this way only becomes a problem when it gets in the way of other personally meaningful goals. Rigid and inflexible efforts to suppress or avoid experiences are said to contribute to impairment and distress when they involve a struggle which gets in the way of other goals and needs (Kashdan et al., 2005). For example, an individual might attempt to suppress all feelings of anxiety without recognising that anxiety has adaptive value; to make them aware of threat and potential danger. To give another example, the suppression or restricting of eating behaviour is problematic because the person wants to restrict their food intake but needs to eat for survival.

The present research aimed to test the hypothesis that conflict between suppression and expression relates to difficulties with emotion-regulation and

behaviour-regulation, and symptoms of distress and psychopathology. An analogue sample was used for two reasons, firstly because this study is the first to test this hypothesis and the methodology was novel, and secondly because it was deemed important to utilise a sample of individuals who varied in the extent to which they experience problems managing everyday emotions and behaviour. Six clinically relevant domains were selected: anger, anxiety, excitement, eating tasty food, drinking alcohol, and spending money. These six were selected on the basis that they are emotions and behaviours that individuals have to manage on a daily basis, and problems managing these emotions or behaviour can manifest as clinical distress. In order to quantify the extent of conflict between these goals an implicit method was used; individuals were asked to consider and list their goals for and against expressing a number of everyday emotions and behaviours and asked to rate the importance of these reasons. It was hypothesised that there would be an interaction effect, such that important goals for suppression would only be problematic when goals for expression were also rated as important. This was tested firstly with respect to individual's ratings of the extent to which they experience problems managing each emotion of behaviour (Study 1), and secondly with respect to scores on validated measures of problems and distress in each domain (Study 2). Multilevel modelling was used to test whether relationships were maintained across the range of emotional and behavioural domains.

Study 1

3.1. Participants and procedure

Participants (192, 174 female) with an average age of 19.64 ($SD = 3.02$) were recruited using the university credits scheme. Participants were given a short scenario for each of six different emotional and behavioural domains: anger, anxiety,

excitement, eating tasty food, drinking alcohol and spending money. The scenarios were intended to prompt individuals to consider their goals relating to each emotion and behaviour, and involved situations where someone would be required to make a choice to either allow themselves to express the emotion or do the behaviour, or not allow themselves to do so. For each scenario participants were given an example reason for expressing the emotion or behaviour, and an example reason for not expressing the emotion or behaviour. Participants were then asked to complete the following tasks for each emotion and behaviour:

1. List their own goals and reasons for expressing the emotion or performing the behaviour.
2. List their own goals and reasons for not allowing themselves to express the emotion or perform the behaviour.
3. On the basis of their own listed goals and the examples given, to rate the overall importance of their goals and reasons for allowing themselves to perform the behaviour or express the emotion.
4. To provide an overall rating of the importance of their goals and reasons to inhibit the behaviour or suppress the emotion.

All of these ratings were scored on a scale from 0 (not important at all) to 10 (extremely important). These overall importance ratings formed the scores for 'expression' and 'suppression'. Individuals were also asked to provide a rating for the extent to which they have a problem managing the emotion or behaviour, on a scale of 0 (no problem at all) to 10 (a severe problem). Participants also completed a series of other measures, listed below.

3.2. Materials

The *Patient Health Questionnaire (PHQ9)* (Kroenke, Spitzer & Williams, 2001): A 9-item measure of symptoms of depression. Participants rate how often they have experienced 9 symptoms in the past 2 weeks, for example, “feeling down, depressed or hopeless”, on a scale of 0, “never”, to 3, “every day”. Kroenke et al. (2001) report reliability of $\alpha = .86$ to $.89$ and found that patients’ scores in the clinic to correlated highly with scores when completing the measure over the telephone 48 hours later ($r = .84$). The scale discriminates individuals with and without a diagnosis of major depression well; a score of 10 or more has 88% sensitivity and 88% specificity for major depression (Kroenke et al., 2001).

The *Generalised Anxiety Disorders Questionnaire (GAD7)*; Spitzer, Kroenke, Williams & Lowe, 2006): A 7-item measure of symptoms of anxiety. Participants rate how often they have experienced 7 symptoms in the past 2 weeks, for example, “worrying too much about different things”, on a scale of 0, “never”, to 3, “every day”. The scale has a 1 week test-retest reliability coefficient of $.83$, internal consistency of $\alpha = .92$, and correlates highly ($r = .72$) with the Beck Anxiety Scale (Beck, Epstein, Brown & Steer, 1988), a well-validated and widely used measure of anxiety symptoms (Spitzer et al., 2006).

The *Satisfaction with Life Scale (SWLS)* (Diener, Emmons, Larsen & Griffin, 1985): A 5-item measure of life satisfaction and well being. Participants indicate their degree of agreement with 5 items, e.g., “in most ways my life is close to my ideal”, on a 7 point likert scale. The scale has two-month test-retest reliability coefficients of $r = .82$ and internal consistency of $\alpha = .87$ (Diener et al., 1985).

3.3. Analysis

The data were analyzed by hierarchical linear modelling (multilevel modelling) because of its natural two-level structure consisting of responses collected for six domains (emotions and behaviours) nested within subjects. Hierarchical linear modelling was preferable to standard regression analysis as it allowed investigation of the importance of individuals' motivations to express or suppress the specific emotion or behaviour in predicting difficulties managing emotions and behaviours and enabled the testing of whether any effects were consistent across domains. The software used for this modelling, SPSS Mixed (SPSS, 2005) also allowed us to model the non-independence of multiple observations from the same individual about different domains by modelling the autoregressive covariance structure.

Results

Before conducting the multilevel analysis, correlation analyses were conducted for the problem ratings and validated measures of depression, anxiety and well-being, in order to establish whether individual's ratings of problems in each domain constituted genuinely distressing difficulties regulating the emotions or behaviour. Ratings of problems in each domain correlated significantly with elevated symptoms of depression and anxiety, and reduced well-being (Table 3.1).

Table 3.1.

Correlations between problem ratings in Study 1 and measures of distress and well being

Problem ratings	PHQ9 Depression	GAD7 anxiety	SWLS well-being
Anger	.23	.30	-.15
Anxiety	.43	.52	-.24
Excitement	.32	.33	-.18
Eating tasty food	.32	.26	-.23
Drinking alcohol	.21	.31	-.13
Spending	.36	.24	-.31

Note. All correlations in bold are significant at $p < .05$.

Hierarchical multi level analyses were then conducted, with the variables entered in four steps. All variables were standardised, and the interaction between ‘expression’ and ‘suppression’ was formed by calculating the product of the standardised ‘expression’ and standardised ‘suppression’ scores. A further three-way interaction term was formed by calculating the product of the interaction between ‘expression’ and ‘suppression’ and ‘domain’, to test whether any significant 2-way interaction effects were dependent on particular domains. Improvement in model fit between steps was determined by the change in -2 times the log-likelihood statistic ($-2LL$), which has a chi-square distribution. Reductions in the $-2LL$ statistic indicate improved model fit, whilst increases indicate worsened model fit. Significant interaction effects were graphed in order to inspect the nature of the interaction.

Model 1 predicted standardised ratings of problems managing emotions or behaviours. In Step 1, age, gender and domain were entered. Age was not a significant predictor ($\beta = -.04, p = .23$), gender was not significant ($\beta = .10, p = .31$),

and domain did not reach significance ($\beta = -.03, p = .10$), indicating that problem ratings did not vary significantly according to the specific domain or emotion or behaviour.

In Step 2, the total, standardised scores for ‘suppression’ and ‘expression’ were entered, which significantly improved the model fit ($\chi^2 = -42.26, p < .001$). ‘Expression’ scores were a significant positive predictor of problems managing emotions or behaviour ($\beta = .09, p = .003$), and ‘suppression’ scores were also a significant positive predictor of problem ratings ($\beta = .23, p < .001$).

In the third step, the interaction term was entered, which significantly further improved the fit of the model ($\chi^2 = -6.54, p < .05$). The interaction term was a significant predictor of problem ratings ($\beta = .09, p < .001$).

Finally, the three-way interaction between ‘expression’, ‘suppression’ and ‘domain’ was entered in the fourth step. This did not improve model fit ($\chi^2 = 2.91, p > .05$) and the three-way interaction was not significant ($\beta = .02, p = .25$), so the three-step model was retained.

This interaction between ‘expression’ and ‘suppression’ is depicted in Figure 3.1. When expression scores were low, increases in individuals’ ratings of the importance of their goals for suppression related to relatively small increases in problem ratings ($r = .26$). In contrast, when importance ratings for expression were high, important goals for suppression related to larger increases in problems managing emotions and behaviour ($r = .61$). Simple slope analysis revealed that whilst both gradients differed significantly from zero, the relationship between suppression and problem ratings was 83% higher when expression scores were high compared to when they were low.

Discussion

The results indicate that the coexistence of important reasons for expressing and suppressing emotions or behaviour relate to problems managing the emotion or behaviour. The interaction effect was significant indicating it is not suppression alone that relates to problems, but rather suppression is problematic in the presence of important opposing goals. Further, the non-significant effect of domain indicates that the specific emotion or behaviour in question did not affect results; the results applied across all 6 domains. However, this study was limited because it did not utilise clinical measures of problems. It was therefore deemed important to conduct a further study to replicate the findings from Study 1, utilising validated measures of psychopathology in each of the six emotional and behavioural domains, to establish whether conflicting goals for expression and suppression related to clinically significant distress in a range of domains.

Study 2

3.4. Participants and procedure

A sample of 72 participants (66 female) with an average age of 19.25 ($SD = 1.29$) were recruited using the university credits scheme. This study replicated the procedure described in Study 1 but included further measures of psychopathology in each domain. The questions described in Study 1 were used again in Study 2 to assess the importance of participants' goals for expression and suppression and their problems managing the different emotions and behaviours. In addition, the PHQ9 measure and GAD7 measure were also used again in Study 2. In Study 2, excellent internal consistency was obtained for the PHQ9 measure ($\alpha = .81$) and for the GAD7 measure ($\alpha = .75$). Participants ratings of problems managing anxiety correlated significantly and positively with GAD7 scores ($r = .46, p < .001$).

3.5. Additional measures

The *Brief Anger and Aggression Questionnaire* (BAAQ; Maiuro, Vitaliano & Cahn, 1987): A scale comprising 6 items scored on 5 point scale from very unlikely to very likely, for example, “I easily lose my patience with people”. The scale has been found to have good one-week test-retest reliability, $r = .84$, and the scale correlates with Buss-Durkee Hostility Inventory total scores, $r = .78$, $p < .001$ (Maiuro et al., 1987). In this study, $\alpha = .64$. The scale tended towards a positive correlation with ratings of problems managing anger, $r = .26$, $p = .06$.

The *Mood Disorders Questionnaire* (MDQ; Hirschfield, Williams, Spitzer et al., 2000): Individuals are asked with respect to 13 items “has there ever been a period of time when you...”, for example, “felt so good or hyper that other people thought you were not your normal self or you were so hyper that you got into trouble”. A screening score of 7 or greater gives good sensitivity (73%) and excellent specificity (90%) for bipolar disorder compared to other mood disorders and controls, based on the Structured Clinical Interview for DSM-IV diagnosis (SCID) (Hirschfield et al., 2000). Rather than screen for possible bipolar disorder, in the present research the focus was to assess extent of elevated mood, so a sum was calculated for the 13 items so that higher scores indicated more hyperactive or excitable mood symptoms. In this study, $\alpha = .90$. The scale did not correlate with participants’ ratings of problems managing excitement, $r = .06$, $p = .65$.

The *SCOFF Questionnaire* (Morgan, Reid & Lacey, 1999): The scale comprises of 5 yes or no items, for example, “would you say that food dominates your life”, the presence of which indicates problems with eating. Each “yes” response is coded with a 1 and scores of 2 or more indicate likely anorexia nervosa or bulimia. This threshold gives 100% sensitivity for anorexia and bulimia,

separately and combined, and specificity of 87.5% for controls (Morgan et al., 1999). In this study, $\alpha = .43$. The scale correlated significantly and positively with ratings of problems managing eating, $r = .51, p < .001$.

The *AUDIT Questionnaire* (Babor, De La Fuente, Saunders & Grant, 1989): A 10-item scale developed by the World Health Organization (WHO) to assess drinking habits and frequency. Items are scored on 5 point frequency scale with anchor points depending on the question, for example, “how often do you have 6 or more drinks on one occasion (never – daily or almost daily)”. It is coded so that higher scores indicate more frequent/ excessive drinking. The specificity for hazardous alcohol consumption compared to non-hazardous alcohol consumption has been previously been found to range from 78-88%, and scores of 8 or higher at initial interview predicted alcohol related social problems, medical disorders and hospitalisation 2-3 years later (Conigrave, Saunders & Reznik, 1995). In this study, $\alpha = .78$. The scale correlated significantly and positively with ratings of problems managing anxiety, $r = .47, p < .001$.

The *Compulsive Buying Scale (CBS)* (Faber & O’Guinn, 1992): A scale comprising of 1 item scored from strongly agree – strongly disagree: “if I have any money left at the end of the pay period I just have to spend it” and 6 items scored on a 5 point scale from very often to never, for example, “I bought myself something to make myself feel better”. The scale is coded with a sum so that higher scores indicate more frequent or excessive spending. The scale effectively specified 88% of self-identified compulsive buyers from non-compulsive buyers, and all seven items strongly loaded onto a single factor (average factor coefficient = .79), suggesting excellent validity and reliability (Faber & O’Guinn, 1992). In this study, $\alpha = .72$. The

scale correlated significantly and positively with ratings of problems managing anxiety, $r = .47, p < .001$.

3.6. Analysis

The data were analysed in the same way as in Study 1, using hierarchical multi-level modelling. The predictors included in the models were the same: age, gender, domain, 'expression', 'suppression', the 'expression' and 'suppression' interaction term, and the three-way interaction between 'expression', 'suppression', and 'domain', as above. Two models were tested, firstly, a model predicting the single-item self-report item assessing participants' problems in each domain, as in Study 1, and secondly, a model predicting the standardised score on the validated measure of distress in each domain.

Results

Model 1 predicted standardised ratings of problems managing emotions or behaviours. In Step 1, age, gender and domain were entered. Age ($\beta = .03, p = .65$) and gender ($\beta = .11, p = .60$) were not significant predictors, and domain did not reach significance ($\beta = -.06, p = .05$), indicating that problem ratings did not differ significantly depending on the specific domain or emotion or behaviour.

In Step 2, the total standardised scores for 'suppression' and 'expression' were entered, but this did not significantly improve model fit ($\chi^2 = -1.062, p > .05$). 'Expression' scores were not a significant predictor of problems ratings ($\beta = .05, p = .37$), but 'suppression' scores were a significant positive predictor of problem ratings ($\beta = .13, p = .02$).

In the third step, the interaction term was entered, which significantly improved the fit of the model ($\chi^2 = 3.92, p < .05$). The interaction term was a significant predictor of problem ratings ($\beta = .11, p = .02$).

Finally, the three-way interaction between ‘expression’, ‘suppression’ and ‘domain’ was entered in the fourth step. This significantly worsened model fit ($\chi^2 = 3.94, p < .05$) and the three-way interaction was not significant ($\beta = .03, p = .26$), so the three-step model was retained.

The interaction between ‘expression’ and ‘suppression’ was graphed, and is shown in the second panel of Figure 3.1. As in Study 1, the highest ratings of problems managing emotions and behaviours resulted when individuals rated both opposing sets of reasons as highly important. Increases in individuals’ ratings of the importance of their goals for suppression did not relate to substantial increases in problems managing emotions or behaviour when goals for expression were not rated as highly important ($r = .01$). However, when importance ratings for expression were high, increases in individuals’ ratings of the importance of their goals for suppression related to increased problems managing emotions and behaviour ($r = .45$). Simple slope analysis revealed that the relationship between suppression and problem ratings was 99% higher when expression scores were high compared to when they were low.

Model 2 predicted standardised scores on the measure of psychopathology in each domain. In Step 1, age, gender and domain were entered. Age was not a significant predictor ($\beta = -.09, p = .12$) and gender was not significant ($\beta = -.09, p = .66$). The effect of domain was not a significant predictor of problem ratings ($\beta = .03, p = .27$).

In Step 2, the total, standardised scores for ‘suppression’ and ‘expression’ were entered, but this did not significantly improve the model fit ($\chi^2 = -1.13, p > .05$). ‘Expression’ scores were not significant ($\beta = .04, p = .55$), and ‘suppression’ scores were also not a significant predictor of problem ratings ($\beta = .00, p = .94$).

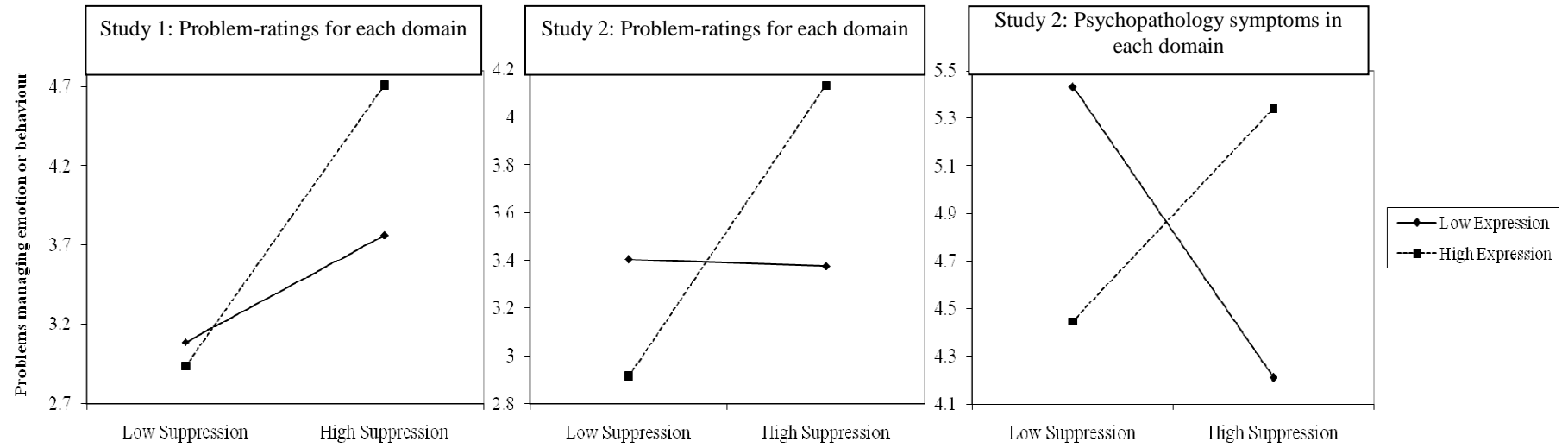
In the third step, the interaction term was entered, significantly improving the fit of the model ($\chi^2 = 4.13, p < .05$). The interaction term was a significant predictor of problem ratings ($\beta = .11, p = .02$).

Finally, in the fourth step, the three-way interaction between ‘expression’, ‘suppression’ and ‘domain’ was entered. This significantly worsened model fit ($\chi^2 = 4.14, p < .05$) and the three-way interaction was not significant ($\beta = -.03, p = .33$), so the three-step model was retained.

This interaction effect of ‘expression’ and ‘suppression’ is depicted in the third panel of Figure 3.1. When expression scores were low, increases in individuals’ ratings of the importance of their goals for suppression related to *decreases* in psychopathology symptoms ($r = -.26$). However, when individuals’ ratings of the importance of their goals for expression were high, increases in individuals’ ratings of the importance of their goals for suppression related to *increases* in symptoms of psychopathology ($r = .19$). Simple slopes analysis revealed that the relationship between suppression scores and psychopathology was 46% different when expression scores were high versus when they were low. Thus, when using clinical measures of problems in each domain, whilst the finding from Study 1 was replicated that the combination of highly opposing important goals for expression and suppression related to elevated problems, individuals who rated both sets of goals as low in importance also had higher scores on the psychopathology measures.

Figure 3.1.

The effect of the interaction between suppression and expression on problem ratings and psychopathology symptoms



Discussion

Study 2 replicates the findings of Study 1 that it is the interaction between goals for expression and goals for suppression that predict both individuals' ratings of their problems managing emotions and behaviour. In addition, the interaction between goals for expression and goals for suppression significantly predicted validated measures of problems in each domain. The figures reveal that it is when both opposing sets of goals and reasons are rated as highly important most problems occur, although in the context of symptoms of psychopathology there seems to be an additional problem when individuals rate both sets of reasons as low in importance.

General Discussion

The results of Study 1 and 2 converge on the finding that the presence of opposing important goals for controlling emotions and behaviour is problematic and relates to clinically-significant distress. Whilst highly important goals for suppression alone did not consistently relate to increased problems managing emotions and behaviour, the combination of highly important goals for expression and highly important opposing goals for suppression related to problem ratings and psychopathology symptoms across six emotions and behaviours. In Study 1, the interaction between importance ratings for expression and importance ratings for suppression related to self-reported problems managing emotions and behaviour across six domains, and in Study 2 this finding was replicated using validated measures of distress in each domain. Highly important goals for suppression related to problems and psychopathology when individuals also held highly important goals for expression. In Study 2, when individual's goals for expression were rated as low in importance, important goals for suppression actually related to lower symptoms of psychopathology, further supporting the argument that suppression alone is unlikely

to be distressing, but in combination with opposing goals it may be problematic. The non-significant three-way interaction in all 3 analyses suggests that this mechanism applies across the range of emotions and behaviours assessed in this research, suggesting conflict may be important in determining a range of emotion- and behaviour-regulation problems. These findings represent an important extension to the existing literatures on goal conflict and suppression.

Whilst the present findings do suggest that suppression can be problematic, in line with the existing literature (e.g., Gross & John, 2003), the results suggest that suppression alone is not problematic, but rather suppression it is problematic when it involves conflict with opposing important goals and reasons to not suppress emotions or behaviours. This finding demonstrates the importance of considering interactions when exploring the relevance of concepts like expression and suppression. Expression and suppression are not independent, and this poses a problem for the existing research which has not controlled for the effects of expression when investigating the consequences of suppression. Research has explored interaction effects in experimental contexts and found that the ability to both enhance and suppress emotional expression is important for long-term adjustment (Bonanno, Papa, Lalande, Westphal & Coifman, 2004). This indicates that whilst the presence of conflicting goals for expression and suppression at any one time may be detrimental to well-being, the ability to flexibly adjust between emotion expression and suppression over time may promote well-being.

The findings of these studies support the arguments proposed by Polivy (1998), who suggested that suppression would be problematic when the experience in question was highly desirable, or the 'expression' goals were important, and Kashdan et al. (2005), who argued that suppression would be maladaptive if it meant

obstructing other important goals. The interaction effect in this research may also explain why some of the research into suppression has been inconsistent, with some studies finding that emotion suppression is not maladaptive, and can actually be helpful (e.g., Dunn, Bilotti, Murphy & Dalgleish, 2009).

The present research adds to the existing literature on goal conflict, as it indicates that the presence of opposing or conflicting goals for regulating everyday emotions and behaviours is problematic and distressing. Previous research in the area of goal conflict has been somewhat inconsistent, potentially due to methodological difficulties in quantifying conflict between goals that are not in individuals' awareness (Kelly et al., 2011). Thus, there may be promise in identifying conflicts more implicitly through assessing the importance of opposing goals, as this method does not require asking participants to quantify conflict explicitly.

Whilst the aim of the present research was to explore whether the presence of opposing goals determines the negative effects of suppression, inspecting the interaction effect in the final model (Study 2) reveals that individuals who possess neither important goals for suppression nor important goals for expression also experience more problems on the clinical measures. Future research could explore the reasons for this effect, but one possibility is that these individuals may be less aware of the reasons to control their emotions and behaviours in one way or another, or may not be striving to regulate and remain in control of these emotions or behaviours, and this may lead these emotions and behaviours to become dysregulated.

It is noted that the cross-sectional design and self-report outcome measures are limitations of this study. However, with the exception of excitement, participants' self-ratings of problems in each domain correlate with validated

measures of problems in each domain, and correlate with general distress and low well-being. In addition, the findings were replicated in three separate analyses across two studies, suggesting the interaction effect is robust. It is important to note that inter-personal conflict, or disagreement between one's own goals and the goals or expectations of others, may also be relevant in determining the negative effects of suppression. This possibility could not be explored in the present research, but may be a useful avenue for future research.

The transdiagnostic approach emphasises the importance of exploring common processes and mechanisms across disorders and across therapies (e.g., Mansell, 2011), and the present research suggests that the conflict which may be caused by simultaneously holding highly important goals for the expression and suppression of emotions and behaviours might represent a transdiagnostic concept, driving difficulties with self-regulation in a range of emotional and behavioural domains. Further, the difficulties with everyday emotions and behaviours studied in this research clearly relate to common psychological disorders, for example, eating disorders or generalised anxiety disorder. This suggests these findings have implications for the understanding and treatment of such disorders. It is argued that psychotherapeutic approaches to a range of psychological difficulties might benefit from explicitly bringing individuals' goals and motivations, and the amount of importance they attach to these goals, into awareness. The expression and suppression questions developed for this research may be a useful tool for researchers or clinicians to identify conflicting motivations. It is argued that clinicians should emphasise the identification and exploration of opposing goals for different emotions and behaviours, particularly when there is ambivalence about

change, and therapeutic approaches should aim to consider and reprioritise conflicting goals to improve functioning.

**CHAPTER 4: POSITIVE AND NEGATIVE APPRAISALS OF THE
CONSEQUENCES OF ACTIVATED STATES UNIQUELY RELATE TO
SYMPTOMS OF HYPOMANIA AND DEPRESSION**

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Abstract

Individuals may appraise internal states positively or negatively. Positive appraisals involve desiring or pursuing the state or experience, whilst negative appraisals involve dreading or avoiding the experience. The extent to which individuals make extreme positive or negative appraisals of high, activated, energetic states might determine whether they experience symptoms of high or low mood. This study extends the existing literature by considering the role of opposing appraisals and beliefs about the same internal states and by controlling for the potential correlation between depression and activation symptoms. Extreme, positive and negative appraisals of activated mood states related distinctly to experiences of activation and depression symptoms respectively, in an analogue sample ($n = 323$). Positive appraisals of activated internal states were uniquely associated with elevated activation and hypomania symptoms. Negative appraisals of the same states were uniquely associated with elevated depression symptoms. Opposing appraisals of internal states may underlie mood swing symptoms.

Keywords: appraisals; internal states; mood swings; activation; depression; emotion regulation.

Introduction

Within bipolar disorder (BD), different factors may underlie symptoms of mania and depression (Carver & Johnson, 2009). The beliefs individuals hold about different mood states and the way individuals appraise different mood states may be particularly relevant (Jones, 2001; Mansell, Morrison, Reid, Lowens & Tai, 2007). For example, internal states such as feeling high and energised or feeling low and lacking energy can be interpreted in extreme or personalised ways. A person might appraise mood states as signalling something extremely positive or negative about them as a person. For example, feeling 'sped up' might be interpreted as signalling extreme intelligence (e.g., Jones, 2001). Alternatively, someone may believe that mood states are useful to experience because they help them achieve important goals. For example, a person might believe they need to feel high to be productive at work. Or, an individual may think that experiencing certain moods or states will lead to positive or negative consequences. For example, they may think feeling low in energy means they are going to spiral into depression.

Thus, extreme positive or negative appraisals about moods and internal states may be especially important in determining symptoms of mania or hypomania and depression, as these may influence the way individuals attempt to regulate their emotions, which may in turn influence mood symptoms. Consequently, individuals who appraise activated states as extremely positive may strive to experience more of these moods and internal states, leading their mood to escalate towards mania. However, if individuals appraise the same states as extremely negative, they may strive to avoid these states, and dampen any experiences of these moods as they arise, driving their mood downwards into depression (Mansell et al. 2007).

Recent research attempting to delineate mania and depression has explored the role of related concepts in BD, including self-appraisals (Jones & Day, 2008; Jones, Mansell & Waller, 2006), emotion-regulation strategies (Carver & Johnson, 2009; Feldman, Joormann & Johnson, 2008), and beliefs about success and failure (Eisner, Johnson & Carver, 2008). Research into appraisals of internal states is yet to delineate mania and depression. There is evidence from research using the Hypomanic and Positive Predictions Inventory (HAPPI) for a combination of extreme positive and negative appraisals of different high-activation and low-activation states in BD and hypomania (Mansell, 2006; Mansell, Rigby, Tai & Lowe, 2008). These appraisals have also been found to differentiate individuals with bipolar disorder from individuals with unipolar depression (Alatiq et al., 2010; Mansell et al., 2011). Mansell (2006) proposed that each set of appraisals is associated with specific symptom clusters. However, research is still to test this possibility directly.

Previous studies into appraisals of mood or internal states in hypomania and depression have focused on positive appraisals of activated mood states in isolation (e.g., Jones & Day, 2008); no research has explicitly compared positive and negative appraisals about the same mood states. The failure to consider and control for the effects of negative appraisals of activated states is problematic, as positive and negative appraisals of activated states are correlated (Mansell et al., 2008), and thus any associations found between positive appraisals of these states and mood symptoms may be attributable to negative appraisals. This research addresses this limitation of the existing literature.

This study was conducted using an analogue sample experiencing a range of hypomania or activation and depression symptoms, which represent an analogue of the two primary clusters of symptoms experienced by individuals with bipolar

disorder (Angst, 1998). Researchers have advocated the use of analogue samples in BD research (Depue, Slater, Wolfstetter-Kausch et al., 1981). We were interested in whether different appraisals of the same states might relate to different mood symptoms, and so we focused on extreme positive and negative appraisals of one type of internal state; activation, involving high energy or high mood experiences. We hypothesised that positive appraisals of these states would be uniquely associated with the experience of symptoms of analogue hypomania and activation, whilst negative appraisals of the same states would be uniquely associated with depression.

Method

4.1. Participants and procedure

A sample of 323 undergraduate students (282 female) participated in this study ($M = 19.82$, $SD = 2.82$). Participants completed all measures as part of wider research projects reported elsewhere (Dodd, Mansell, Sadhnani, Morrison & Tai, 2010; Mansell et al., 2008).

4.2. Materials

Symptoms and experiences of high and low mood were assessed using the activation and depression subscales of the *Internal States Scale (ISS)* (Bauer, Crits-Christoph, Ball, et al., 1991). Each item refers to a symptom of high or low mood, and participants rated how much they had experienced the symptom in the last 24 hours, from ‘not at all/ rarely’ to ‘very much so/ much of the time’. The activation subscale assesses current symptoms of hypomania and a heightened sense of behavioural and cognitive activation, e.g., “I feel overactive”, and “My thoughts are going fast”. The depression subscale assesses current depressive symptoms, e.g., “I feel depressed”, and “It seems like nothing will ever work out for me”. Internal

consistencies for all ISS subscales are excellent, with Cronbach's alpha coefficients from .81 to .92. Activation and depression scores are significantly higher in manic and depressed patients respectively, and scores on the measure correlate with clinician symptom ratings (Bauer et al., 1991; Bauer, Vojsa, Kinosian, Altshuler, & Glick, 2000). Discriminant function analysis allocated 88% of patients to the correct diagnostic groups (Bauer et al., 1991). The measure is commonly used in research into bipolar disorder and bipolar vulnerability (e.g., Dodd et al., 2010; Jones & Day, 2008; Mansell et al., 2008).

Individuals' appraisals of and beliefs about high, activated, internal states were assessed using items specifically selected from the *Hypomanic Attitudes and Positive Predictions Inventory (HAPPI-50)* (Mansell, 2006). The original HAPPI scale is a 50-item questionnaire measure of a range of positive and negative beliefs about different internal states, for example, "When I feel agitated and restless it means that I am about to have a breakdown". Items are rated by intersecting a line between 0% ("don't believe this at all") to 100% ("believe this completely"). The items do not assess individuals' current experiences of different mood states, but rather assess individuals' beliefs and appraisals about different mood states whether or not they are currently experiencing those states, as observed by Alatiq et al (2010). This is why the items are preceded by statements such as "When I feel...", "When I am more active..." etc. There is evidence to suggest that the appraisals measured by the HAPPI confer cognitive risk for mood symptoms and mood swings and are not part of the phenomenology of mood swings, as the HAPPI scale prospectively predicts bipolar disorder symptoms in a month's time, even when controlling for baseline symptoms (Dodd, Mansell, Morrison & Tai; in press).

In order to directly compare positive and negative appraisals about activated internal states, these items were specifically selected from the HAPPI scale. Three independent raters categorised each of the HAPPI-50 items as either positive appraisals about activated mood states, negative appraisals about activated mood states, or neither. The agreement between the raters who categorised the HAPPI items was significant and very high, $k_{gen} = .79$, $SE_{Fleiss} = 0.07$, $p < .001$, $CI_{lower} = .65$, $CI_{upper} = .92$. We took the conservative approach of using only the items upon which all three raters agreed (see Table 4.1). Internal consistency was $\alpha = .85$ for the positive appraisals items and $\alpha = .80$ for the negative items.

Table 4.1.

Full list of positive and negative appraisal items

HAPPI-50 Item	Category
When I feel good, I am sure that everything will work out perfectly	Positive appraisals
When I get excited about something I have no control over my thoughts	Negative appraisals
When I feel excited, my fears and worries are no longer real	Positive appraisals
When my energy levels increase, I can bring about a large rise in my social status	Positive appraisals
When I feel agitated and restless it means that I am about to have a breakdown	Negative appraisals
When I feel full of energy I am extremely funny and witty	Positive appraisals
When I get very agitated about something, I have no control over my behaviour	Negative appraisals
I have all my best ideas when I feel extremely good about myself	Positive appraisals
When I have a lot of energy, I don't need support from anyone or anything	Positive appraisals
When I feel restless, the world becomes full of unlimited opportunities for me	Positive appraisals
Unless I am active all the time, I will end up a failure	Positive appraisals
The better I feel about myself, the worse other people react towards me	Negative appraisals
When I feel more active I realise that I am a very important person	Positive appraisals
When I feel good about myself, I realise that all my previous anxieties and fears are unfounded	Positive appraisals
When I feel really good, people don't understand me	Negative appraisals
When I feel excited I know that other people desire me	Positive appraisals
When I feel good, I know that whatever I do, I could do no wrong	Positive appraisals
Doing anything very active can lead me to have a breakdown	Negative appraisals
When I am more active than usual, other people dislike me	Negative appraisals
When I feel good, I must keep "on the go" all the time or things will fall apart around me	Positive appraisals

Results

Correlations between the symptom clusters and the individual HAPPI appraisal items are reported in Table 4.2.

Table 4.2.

Correlations between total scores on appraisal and mood subscales

	Positive appraisals	Negative appraisals	Depression symptoms	Activation symptoms
Positive appraisals	1			
Negative appraisals	.58**	1		
Depression Symptoms	.25**	.53**	1	
Activation symptoms	.37**	.33**	.25**	1

Note. ** indicates $p < .01$.

We conducted two, two-step hierarchical multiple regression analyses, respectively with outcome variables representing symptoms of activation (Regression 1) and depression (Regression 2). In both regression analyses, the other symptom cluster was included as a covariate in Step 1, in order to establish whether any effects of the different types of appraisals of internal states were unique to activation or depression and not due to correlations between activation and depression. In addition, gender was included as a covariate, as gender differences in depression in particular have been observed in previous research (e.g., Piccinelli & Wilkinson, 2000). The total scores on the positive appraisals items and the negative appraisals items were then entered in Step 2.

Regression 1 predicted activation symptoms. In Step 1, depression symptoms and gender were entered resulting in a significant model ($F(2, 322) = 11.07, p <$

.001). Depression symptoms significantly predicted activation symptoms ($\beta = .24, p < .001$) whereas gender did not ($\beta = .06, p = .25$). In Step 2, positive and negative appraisals were added resulting in a model which was significant and significantly improved fit ($F(4, 322) = 16.53, p < .001, \Delta R^2 = .11, p < .001$). Positive appraisals were a significant predictor; individuals who scored more highly on the positive appraisals factor ($\beta = .30, p < .001$) had significantly elevated activation symptoms. In contrast negative appraisals were not a significant predictor ($\beta = .10, p = .19$).

Regression 2 predicted depression symptoms. In Step 1, activation symptoms and gender were entered resulting in a significant model ($F(2, 322) = 10.60, p < .001$). Activation symptoms significantly predicted depression symptoms ($\beta = .25, p < .001$), whilst gender did not ($\beta = .04, p = .50$). In Step 2, positive and negative appraisals were added, resulting in a significantly improved model ($F(5, 321) = 28.33, p < .001, \Delta R^2 = .24, p < .001$). Negative appraisals were a significant predictor; individuals who endorsed more negative appraisals of activated states ($\beta = .57, p < .001$) had significantly elevated depression symptoms. There was also a trend for individuals who endorsed fewer positive appraisals of activated states to report more depression symptoms ($\beta = -.12, p = .05$). However, this trend did not reach significance at the conventional cut-off ($p < .05$), despite the relatively high power of the analysis (power $\alpha > .80$ to detect effects of $r = .16$). Further, this association between positive appraisals of activated states and depression ($r^2 = .014$) was over twenty times smaller than the association between negative appraisals and depression ($r^2 = .32$), indicating that the former relationship is of less substantive importance.

Discussion

In this research, individuals who tended to appraise activated and energetic internal states in extremely positive ways experienced elevated activation or hypomania symptoms. Individuals who tended to appraise the same states in extremely negative ways experienced elevated depression symptoms. This suggests that depression and activation symptoms are associated with distinct sets of cognitions about mood.

These findings are in line with related research. For example, Carver and Johnson (2009) found responses to positive and negative stimuli and emotions differed between depression and mania; in mania a tendency to up-regulate positive emotions was observed, whilst in depression the opposite tendency was seen. Johnson and Fingerhut (2004) found negative cognitions generally to predict depression but not mania (Johnson & Fingerhut, 2004). Eisner et al. (2008) found that whilst responses to success were associated with mania, responses to failure were associated with depression. Finally, Feldman et al. (2008) found attempts to dampen positive affect characterised depression, whilst positive rumination about positive affect characterised mania. Thus, the findings of the present study converge with other research suggesting dissociation between the two types of mood symptoms.

The findings for activation symptoms are consistent with the models of hypomania and mania proposed by Jones (2001) and Johnson (2005). Jones (2001) proposes that circadian rhythm disruption and other events can trigger certain internal states, and extreme, personalised and positive appraisals of these states can lead to symptoms of mania. In this study these kinds of appraisals did relate to analogue hypomania and activation symptoms. Johnson (2005) proposes that the

way positive life events such as goal-attainment are appraised is significant, a proposal supported by this study, as a number of the positive appraisals of activated states assessed in this research relate to concepts such as success and goal attainment.

However, the present research investigated both analogue hypomania or activation symptoms and analogue depression symptoms, and as such the findings of this research are perhaps best explained by an integrative-cognitive model of mood swings (Mansell et al., 2007). This model proposes that the combination of extreme positive and extreme negative beliefs and appraisals about different mood states drives mood swing symptoms of hypomania, mania or depression, as individuals engage in conflicting attempts to up-regulate and down-regulate their moods based on these conflicting appraisals (Mansell et al., 2007). It follows that positive appraisals of activated states, for example that they signal imminent success, would relate to symptoms of high mood, whilst negative appraisals of the same states, for example that they signal imminent catastrophe or a breakdown, would relate to low mood. The findings of this study support this theory.

Whilst the present research is cross-sectional in its design and so causality cannot be established, research utilising the HAPPI scale has found that appraisals of internal states prospectively predict mood swing symptoms (e.g., Dodd et al., in press). Further, there is evidence that individuals with depression and mania respond differently to positive affect states, engaging in opposing emotion-regulation strategies (Feldman et al., 2008). We contend that mood symptoms may result from emotion-regulation attempts, which are driven by extreme appraisals of internal states.

Thus, individuals who appraise high, energetic internal states as signalling something extremely positive are likely to strive to attain or maintain these experiences by engaging in emotion-regulation attempts which serve to maintain or escalate their mood, resulting in more activation and less depression (Mansell et al., 2007). Further, the manic-defence hypothesis (e.g., Abraham, 1911) would suggest that individuals may identify these experiences of extreme activation and high mood as ways of alleviating or avoiding depression, which could further escalate their mood. However, individuals who appraise highly activated states as signalling something extremely negative may be more likely to try to down-regulate their moods, in an attempt to avoid the perceived negative consequences of these states, resulting in experiences of low mood and depression (Mansell et al., 2007). Once depressed, individuals who appraise high moods extremely negatively may also be likely to dampen positive moods as they arise. This is in line with existing literature on depression and may help explain why depression can persist; individuals with depression and low self-esteem dampen positive moods (J. V. Wood, Hiempel & Michela, 2003). Indeed, even individuals recovering from depression actively avoid positive emotional experiences (Hayes & Feldman, 2004). In this sense, positive appraisals of activated mood states may be protective for depression.

Given that extreme appraisals of mood states prospectively predict experiences of extreme mood and are not merely correlates or consequences of mood (Dodd et al., in press), it is possible that other personality or trait variables might underlie the tendency to appraise mood states in either positive or negative ways. For example, dysregulation of the behavioural activation system (BAS; Gray, 1987) and resulting sensitivity to reward or success and risk or threat (e.g., Depue & Iacono, 1989; Eisner et al., 2008) might render individuals more likely to make reward-

related (positive) or risk-related (negative) appraisals of activated internal states, which in turn influence mood. Dodd et al. (2010) found that whilst BAS dysregulation correlated with activation symptoms at 3-month follow-up, when controlling for Time 1 mood and appraisals of internal states (as measured by the HAPPI), only appraisals of internal states predicted symptoms of activation. Thus, BAS dysregulation may affect mood indirectly, via its impact on appraisals.

This study highlights the methodological importance of partialling out depression symptoms when predicting activation or hypomania, and vice versa. Researchers should consider controlling for mania and depression symptoms, respectively, when investigating predictors or correlates of depression and mania. In this study, this was particularly important because activation and depression symptoms were correlated. Further, researchers interested in the importance of appraisals of internal states in hypomania and mania should ideally assess both positive and negative appraisals of activated states. This is in line with A. M. Wood and Tarrier (2010), who argue that it is important to place an equally weighted focus on both the positive and negative aspects of life when conducting clinical research and practice, partially as they are unlikely to be independent. In future, researchers could also compare positive and negative appraisals of depressed states.

A limitation of this study is the gender imbalance of the sample, which was predominantly female. This may explain why in this study there was no gender difference in symptoms of depression. The present study utilised an analogue sample. However, the correlation between activation and depression in this study suggests at least some of the individuals in this sample were experiencing both high and low mood, indicating the presence of genuine vulnerability to BD and mood swings in this analogue sample. Further, a recent study has shown that the interaction

between positive and negative appraisals differentiates individuals with bipolar disorder from individuals with unipolar depression and non-clinical controls; positive appraisals of activated states predicted bipolar disorder when individuals also endorsed negative appraisals of the same states (Kelly, Mansell, Wood, Alatiq, Dodd & Searson, in press). This supports the suggestion that opposing appraisals of the same states might underlie mood swings. Further research replicating these findings is welcomed.

The finding that different sets of extreme appraisals of internal states are associated with activation and depression has implications for the understanding of bipolar disorder. Given that bipolar disorders are characterised by both activation and depression, this suggests that individuals with bipolar disorder may appraise activated states in multiple and potentially conflicting ways, and may experience conflict over whether to strive to avoid or attain these states. This conflict may cause and maintain distressing mood swing symptoms in bipolar disorder. Future research could explore whether appraisals of internal states are particularly important in predicting the escalation into mania, or investigate whether over time different appraisals of mood states are salient and if changes in appraisals predict oscillations of mood. This is important, as appraisals of mood states are likely to precede and cause emotion-regulation attempts and responses (Mansell et al., 2007).

Appraisals of internal states might represent useful targets for change in psychological therapy for bipolar disorder. Mansell et al. (2007) describe a range of cognitive and cognitive-experiential therapeutic techniques based on the integrative-cognitive model. For example, they suggest that therapists could encourage clients to explore the ‘pros’ and ‘cons’ of high and low mood states, consider the origins of the client’s beliefs about different internal states, and help the client to question these

beliefs. They also suggest that behavioural experiments might be useful; therapists could encourage clients to experience internal states without trying to control or change them, in order to test out their beliefs about the consequences of these internal states. There is emerging evidence indicating that this approach to therapy for BD is effective (e.g., Searson, Mansell, Tai & Lowens, 2009).

The present study supports the key principles of an integrative cognitive model of mood swings (Mansell et al., 2007). Research is now needed to establish the causal influence of appraisals on emotion-regulation efforts and of emotion-regulation on mood symptoms and to further test the effectiveness of the therapeutic approach based on the model.

**CHAPTER 5: EXTREME POSITIVE AND NEGATIVE APPRAISALS OF
ACTIVATED STATES INTERACT TO DISCRIMINATE BIPOLAR
DISORDER FROM UNIPOLAR DEPRESSION AND NON-CLINICAL
CONTROLS**

In press as:

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(in press). Extreme positive and negative appraisals of activated states interact to
discriminate bipolar disorder from unipolar depression and non-clinical controls.

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Abstract

This research aimed to test whether positive, negative, or conflicting appraisals about activated mood states (e.g., energetic, high states) predicted bipolar disorder. A sample of individuals from clinical and control groups (171 with bipolar disorder, 42 with unipolar depression, and 64 controls) completed a measure of appraisals of internal states. High negative appraisals related to a higher likelihood of bipolar disorder irrespective of positive appraisals. High positive appraisals related to a higher likelihood of bipolar disorder only when negative appraisals were also high. Individuals were most likely to have bipolar disorder, as opposed to unipolar depression or no diagnosis, when they endorsed both extreme positive and extreme negative appraisals of the same, activated states. Limitations: Appraisals of internal states were based on self-report. The results indicate that individuals with bipolar disorder tend to appraise activated, energetic internal states in opposing or conflicting ways, interpreting these states as *both* extremely positive and extremely negative. This may lead to contradictory attempts to regulate these states, which may in turn contribute to mood swing symptoms. Psychological therapy for mood swings and bipolar disorder should address extreme and conflicting appraisals of mood states.

Keywords: bipolar disorder, activation, appraisals, mood swings

Introduction

Ascertaining the exact nature of the psychological processes underlying bipolar symptomatology is a clear priority, as for effective psychotherapeutic interventions to be developed, the targets for change must be properly specified. To this end, there has been a surge in research attempting to identify these psychological processes, particularly focusing on cognitions (Mansell & Pedley, 2008). Cognitions represent crucial targets for therapy because they can be targeted outside of manic episodes and because they can cause vulnerability to further episodes (Lam et al., 1999).

Cognitions about mood states may be particularly relevant in causing and maintaining mood symptoms in bipolar disorder (BD) (Mansell et al., 2007). The extensive research on these cognitions in BD has tended to focus on either positive biases in cognition or negative biases in cognition. A recent cognitive model of mood swings suggests that positive *and* negative biases in cognitions about mood states are relevant in BD. Individuals can appraise the same mood states in multiple, positive and negative ways, and it is argued that the extent to which these multiple appraisals are in opposition with one another determines mood swing symptoms (Mansell et al., 2007).

It is proposed that the presence of opposing or contradictory appraisals about mood states may drive mood fluctuations and also prevent change, as despite their negative beliefs about extremely activated states, individuals do not want to give up these experiences. Research is yet to explore this possibility. This article reports on the first empirical study to explore whether the presence of multiple, opposing appraisals of the same states might discriminate individuals with bipolar disorder from individuals with unipolar depression and controls.

Previous research into BD and hypomania has focused on a number of positive biases in cognitions about mood states including highly positive self beliefs (Lam et al., 2004) and positive attributions of hypomania-relevant experiences (Jones et al., 2006; Alatiq et al., 2010; Mansell et al., 2011). For example, individuals vulnerable to bipolar episodes may believe that when they feel full of energy, they are extremely funny and witty, or may believe they can only achieve important goals when they are feeling high.

A range of negative biases in cognitions have been associated with hypomania and BD, including low self esteem (Blairy et al., 2004), self-criticism (Rosenfarb et al., 1998), dysfunctional attitudes (Scott et al., 2000), a negative attributional style (Bentall et al., 2005). Catastrophic appraisals of different mood states have also been implicated (Alatiq et al., 2010; Mansell et al., 2011). For example, vulnerable individuals may believe that when they get very excited they will lose control of their thoughts or feel that they should be ashamed of themselves for getting agitated.

Consistent with the above summary, a review of the literature on the psychological processes associated with manic symptoms concluded that both positive and negative biases in cognition are involved (Mansell & Pedley, 2008). However, no studies have tested whether positive and negative biases *interact* to predict bipolar disorder. In the context of positive and negative biases in cognitions about mood states, this is particularly relevant, as opposing beliefs or appraisals about the *same* internal states may influence mood swings (Mansell et al., 2007). The model suggests that these appraisals influence emotion-regulation attempts, as the extreme ways that individuals appraise mood states trigger efforts to exert control, in order to avoid negative consequences, attain success, or seek safety (Mansell et al.,

2007). For example, an individual may appraise their thoughts racing (a high activation state) as both a sign of their great intelligence *and* as a sign of losing control of their mind. The way individuals appraise internal states might influence the way they strive to regulate these states. For example, they may swing between struggling to speed up their thinking (e.g., by taking stimulants) and trying to slow down or stop their thoughts (e.g., by social withdrawal). This process may underlie mood swing symptoms.

Feldman et al., (2007) found that individuals vulnerable to mania tended to engage in opposing or conflicting attempts to regulate the same moods, for example, dampening alongside positive rumination. However, research has not yet explored whether the presence of opposing appraisals of the same mood states, which may drive opposing emotion-regulation attempts, characterises bipolar disorder. This study is the first to empirically test the premise that opposing appraisals of the same mood states predict bipolar disorder, by examining whether positive and negative appraisals interact such that the presence of both extremely positive and extremely negative appraisals of the same states predicts bipolar disorder. The Hypomanic Attitudes and Positive Predictions Inventory (HAPPI) was used to assess appraisals, as it has been found to prospectively predict symptoms in a clinical sample (Dodd et al., in press). This study focused on high-activation states such as feeling energetic. Whilst these states are commonly experienced, extreme appraisals of these states may lead these states to become dysregulated in BD (Mansell et al., 2007). It was hypothesised that individuals who do not appraise these activated mood states in extreme ways would be unlikely to experience problematic mood symptoms, and individuals who appraise mood states either extremely positively *or* extremely negatively might experience extreme symptoms of one type of mood, such as

depression. Thus, it was hypothesised that the interaction between positive appraisals and negative appraisals of the same mood states would differentiate individuals with bipolar disorder from individuals with unipolar depression and controls.

Method

5.1. Participants and procedure

A sample of 279 individuals with a diagnosis of bipolar disorder I or II ($n = 171$), unipolar depression ($n = 42$), or no diagnosis ($n = 64$) participated in this study and completed the Hypomanic Attitudes and Positive Predictions Inventory (HAPPI-50)¹. Participants were recruited through clinical practice, from the community, and through the Manic Depression Foundation (MDF). Participants' diagnosis was established using either the Structured Clinical Interview for the Diagnostic and Statistical Manual (SCID) or the Mini-International Neuropsychiatric Inventory (MINI). The research was approved by the University of Manchester Research Ethics Committee, and all participants gave informed consent.

5.2. Materials

The *Hypomanic Attitudes and Positive Predictions Inventory (HAPPI-50*; Mansell, 2006): A 50-item questionnaire which assesses positive and negative beliefs about internal states, e.g., "When I feel agitated and restless it means that I am about to have a breakdown". The scale was developed in the context of the cognitive model of bipolar disorder (Mansell et al., 2007). Items are rated on a 10 cm visual analogue scale with 1 mm intervals marked from 0% (don't believe this at all) to 100% (believe this completely). Participants marked the line using a pencil, and responses were measured by the researcher and coded such that, for example, a mark at the 50 mm point represented a score of 50% for that item.

The *SCID assessment for DSM-IV-TR diagnosis (SCID-I*; First et al., 2002): A structured interview to establish a patient's diagnosis. Interviewers were trained using the training videos, interview observations, and reflective role-play. Feedback was given to ensure all interviewers achieved appropriate proficiency levels. There was 100% inter-rater agreement between the interviewers and an experienced clinical psychologist on the groupings of participants.

The *MINI* (Sheehan et al., 1998): an abbreviated psychiatric structured interview that assesses the major adult Axis I disorders in the DSM-IV. The MINI has previously been found to have good concordance with the SCID assessment, producing the same diagnosis in 85-95% of cases (Sheehan et al., 1998).²

5.3. Analysis

Three raters independently categorised items on the HAPPI-50 as positive appraisals about activated mood states, negative appraisals about activated mood states, or neither, as the present research aimed to specifically compare positive and negative beliefs about the same mood states. A number of the HAPPI items refer to appraisals of other mood states, so these were classified as 'neither'. The agreement between the raters who categorised the HAPPI items was significant and high, $k_{gen} = 0.79$, $SE_{Fleiss} = 0.07$, $p < 0.001$, $CI_{lower} = 0.65$, $CI_{upper} = 0.92$. However, in order to be as conservative as possible, only items which all three raters agreed upon were included in the analyses. This resulted in 13 positive appraisal items and 7 negative appraisal items (Table 5.1). The positive appraisals and negative appraisals factors were summed. The distribution of the positive and negative appraisals factors differed significantly from the normal distribution (positive: $KS = .072$, $p < .001$, negative: $KS = .11$, $p < .0001$). The data were positively skewed, so the \log_{10} transformation was applied. Stem and leaf plots identified two outliers for the

positive appraisals factor which were removed from the analyses. The summed scores on each subset of HAPPI items were standardised, and the interaction term was calculated by multiplying the two standardised sums together. The groups were coded for comparison using dummy coding; for each comparison the bipolar group was coded as 1 and the comparison group as 0.

Table 5.1.

Final positive and negative appraisal items

HAPPI-50 Item	Final list
1. When I feel good, I am sure that everything will work out perfectly	Positive appraisals
2. When I get excited about something I have no control over my thoughts	Negative appraisals
3. When I feel excited, my fears and worries are no longer real	Positive appraisals
5. When my energy levels increase, I can bring about a large rise in my social status	Positive appraisals
6. When I feel agitated and restless it means that I am about to have a breakdown	Negative appraisals
9. When I feel full of energy I am extremely funny and witty	Positive appraisals
11. When I get very agitated about something, I have no control over my behaviour	Negative appraisals
14. I have all my best ideas when I feel extremely good about myself	Positive appraisals
19. When I have a lot of energy, I don't need support from anyone or anything	Positive appraisals
26. When I feel restless, the world becomes full of unlimited opportunities for me	Positive appraisals
27. Unless I am active all the time, I will end up a failure	Positive appraisals
30. The better I feel about myself, the worse other people react towards me	Negative appraisals
32. When I feel more active I realise that I am a very important person	Positive appraisals
33. When I feel good about myself, I realise that all my previous anxieties and fears are unfounded	Positive appraisals
37. When I feel really good, people don't understand me	Negative appraisals
39. When I feel excited I know that other people desire me	Positive appraisals
40. When I feel good, I know that whatever I do, I could do no wrong	Positive appraisals
41. Doing anything very active can lead me to have a breakdown	Negative appraisals
44. When I am more active than usual, other people dislike me	Negative appraisals
48. When I feel good, I must keep "on the go" all the time or things will fall apart around me	Positive appraisals

Results

5.4. Descriptive statistics

The average age of bipolar I participants was 47.72 ($SD = 11.27$, 66% female), of bipolar II participants was 40.18 ($SD = 12.53$, 66% female), of unipolar depressed participants was 36.52 ($SD = 13.28$, 69% female) and of controls was 36.23 ($SD = 15.01$, 63% female). As participants in the bipolar groups, most notably the bipolar I group, were older on average, age was included as a covariate in all analyses.

5.5. Reliability

Internal consistency was $\alpha = .89$ for the positive appraisals items, and $\alpha = .87$ for the negative items.

5.6. Regression analyses

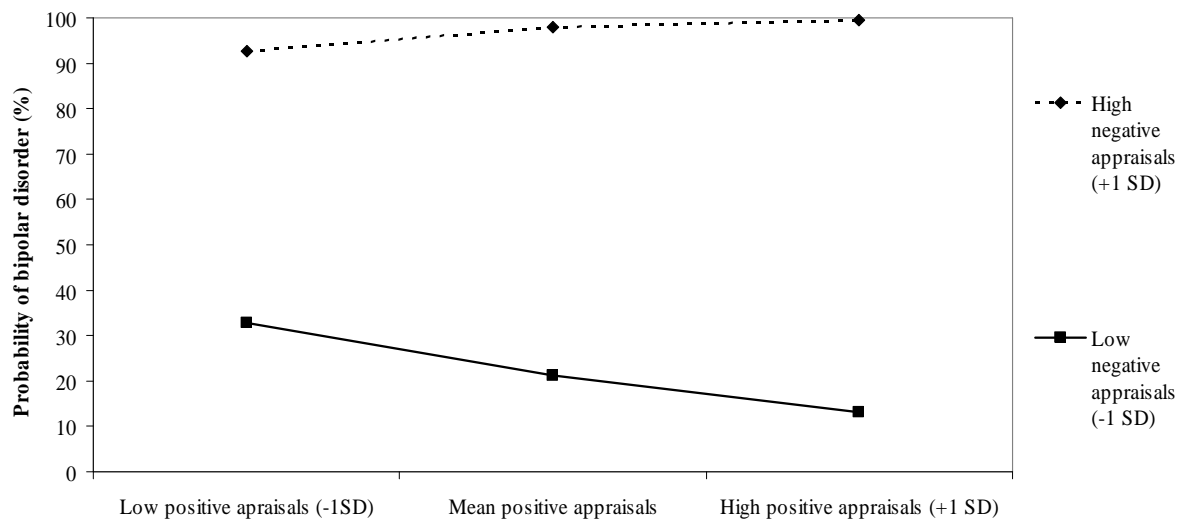
Logistic regressions were performed for three comparisons: bipolar vs. control (model 1), bipolar vs. unipolar (model 2) and bipolar 1 vs. bipolar 2 (model 3). The predictors were entered in three steps: age was entered in step 1 as a potential covariate, the 'positive appraisals' and 'negative appraisals' factors were entered in step 2, and the interaction term was entered in step 3.

Model 1: The hierarchical logistic regression model significantly differentiated individuals with bipolar disorder from controls. Age was a significant positive predictor and the negative appraisals factor was a significant positive predictor. The positive appraisals factor was not significant. The interaction between positive and negative appraisals was a significant positive predictor (Table 5.2). Figure 5.1 depicts the interaction effect. The highest likelihood of bipolar disorder resulted when individuals had high positive and high negative appraisals, whilst the

lowest probability resulted where there were low negative appraisals and high positive appraisals.

Figure 5.1.

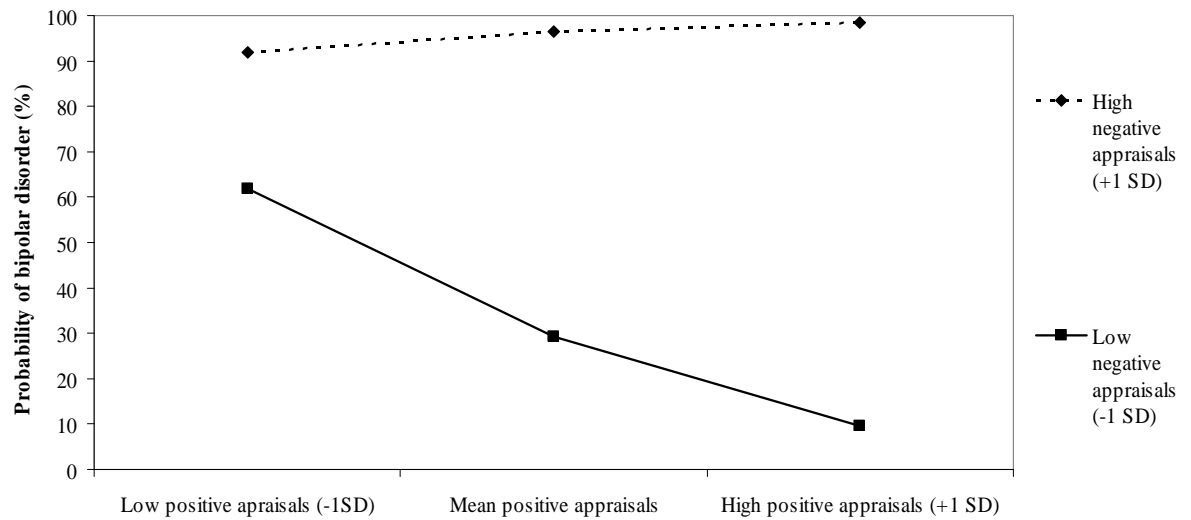
Interaction between positive and negative appraisals predicts likelihood of bipolar disorder when comparing individuals with bipolar disorder to controls



Model 2: The hierarchical logistic regression model significantly differentiated individuals with bipolar disorder from individuals with unipolar depression. Age was a significant positive predictor and the negative appraisals factor was a significant positive predictor. The positive appraisals factor was not significant. The interaction was significant (Table 5.2). Figure 5.2 depicts the interaction effect. The highest likelihood of bipolar disorder was for individuals with high negative and high positive appraisals. The probability of bipolar disorder was lowest when negative appraisals were low and positive appraisals were high.

Figure 5.2.

Interaction between positive and negative appraisals predicts likelihood of bipolar disorder when comparing individuals with bipolar disorder to individuals with unipolar depression



Model 3: There was a main effect of age (Table 5.2), however this effect was not thought to be substantive and instead was thought to be a reflection of the differing ages in the two samples.

Table 5.2.

Results of hierarchical binary logistic regression analyses

Model	Step	Predictor	<i>b</i>	<i>p</i>	<i>Exp(B)</i>	95% <i>CI</i>	χ^2 (<i>df</i>)	χ^2 change
1	1	Age	.79	.00	2.20	1.55-3.12	22.09 (1)	
1	2	Age	1.08	.00	2.95	1.10-2.81		
1	2	Positive	-.17	.57	.85	.47-1.51		
1	2	Negative	1.98	.00	7.27	3.60-14.68	101.32 (3)	79.23 p = .00
1	3	Age	1.21	.00	3.34	2.03-5.50		
1	3	Positive	.37	.26	1.44	.76-2.74		
1	3	Negative	2.58	.00	13.21	5.52-31.65		
1	3	Interaction	.95	.00	2.58	1.58-4.24	118.95 (4)	17.63 p = .00
2	1	Age	.87	.00	2.39	1.51-3.78	15.46 (1)	
2	2	Age	1.02	.00	2.77	1.60-4.79		
2	2	Positive	-.70	.07	.50	.24-1.05		
2	2	Negative	1.89	.00	6.59	2.87-15.13	47.64 (3)	32.18 p = .00
2	3	Age	1.17	.00	3.25	1.77-5.88		
2	3	Positive	-.25	.50	.78	.39-1.59		
2	3	Negative	2.08	.00	8.04	3.38-19.13		
2	3	Interaction	1.11	.02	3.04	1.21-7.61	60.13 (4)	12.49 p = .01
3	1	Age	.59	.01	1.80	1.15-2.84	6.77 (1)	
3	2	Age	.56	.02	1.76	1.10-2.81		
3	2	Positive	-.20	.55	.82	.43-1.57		
3	2	Negative	.19	.62	1.21	.58-2.51	7.15 (3)	.04
3	3	Age	.54	.03	1.72	1.07-2.77		
3	3	Positive	-.23	.51	.80	.41-1.57		
3	3	Negative	.15	.70	1.16	.54-2.49		
3	3	Interaction	-.16	.37	.85	.60-1.21	7.92 (4)	.08

Note. Significant predictors and differences are in bold.

Discussion

The results provide the first empirical evidence that positive and negative cognitions interact to predict bipolar disorder. Individuals with bipolar disorder tended to have high levels of both positive and negative appraisals about the same states. Inspecting the interaction between positive and negative cognitions about mood states in bipolar disorder reveals that whilst high levels of positive appraisals predict an increased probability of bipolar disorder at high levels of negative appraisals; when negative appraisals are low, positive appraisals appear to relate to a lower likelihood of bipolar disorder. Thus, positive appraisals about activated states only appear to predict bipolar disorder in combination with high levels of negative appraisals.

This pattern of the relationship between positive appraisals about activated states and bipolar vulnerability is in contrast to the literature (e.g., Jones et al., 2006; Jones & Day, 2008) which proposes that positive self-appraisals of activated internal states, and not negative appraisals, are the most important predictor of bipolar vulnerability. Previous studies of positive appraisals in bipolar disorder and hypomania have not tested and controlled for negative appraisals. The apparent effect of positive appraisals observed in previous studies may have occurred simply because positive and negative appraisals are correlated (Mansell, 2006, Mansell et al., 2008). However, this provides a misleading picture, as the appraisals interact to predict bipolar disorder (statistically: main effects cannot be interpreted in the presence of an interaction), and the effects of positive appraisals are very different when negative appraisals are also considered. The data demonstrate that the interactive effect of positive and negative cognitions predicts disorder and thus

support the argument that positive and negative aspects of functioning should not be considered individually (e.g., Wood & Tarrier, 2010).

The results of this study are in line with the integrative-cognitive model of bipolar disorder (Mansell et al., 2007). The model suggests that opposing extreme positive and negative beliefs about the same mood states might lead to conflict. For example, an individual might appraise feeling energetic as positive, because they believe they are more productive at work when in this state, but also appraise it as negative at the same time because they fear they may lose control when in this state. Thus, they may feel conflicted about whether to avoid or suppress this state or to strive to attain it. It is suggested that this type of conflict might be important in determining the mood fluctuations observed in bipolar disorder, as individuals oscillate from controlling their moods in one way and then the next. Although prospective research indicates that cognitions about mood do causally influence mood symptoms, further research is needed to establish the relationship between appraisals and emotion-regulation efforts. Nevertheless, there is evidence that individuals with bipolar disorder engage in opposing attempts to regulate the same emotions (Feldman et al., 2007), which offers support for the suggestion that this mechanism may underlie mood swing symptoms.

The results of this study have clinical applications; clients' beliefs and appraisals of moods and internal states, and conflict between opposing beliefs, should be explored therapeutically, as these may drive extreme emotion-regulation attempts which manifest as mood swings. A cognitive-behavioural approach to formulation and treatment based on these premises has been described (Mansell, 2007). Treatment strategies include monitoring mood swings, formulating events triggering mood change, and using the HAPPI to identify conflicting appraisals.

It must be noted that data were not available to enable analyses to be conducted whilst controlling for current symptoms of mania or depression. However, the HAPPI has been found to discriminate different clinical and non-clinical groups when controlling for current symptoms along with demographic variables (Mansell et al., 2011) and to prospectively predict symptoms (Dodd et al., in press), so there is evidence that the appraisals assessed by the HAPPI are predictive of symptoms and not a consequence of symptoms. Nevertheless, this is a limitation of this study that should be addressed in future research.

In conclusion, the present research provides the first empirical evidence for the presence of extreme, opposing or conflicting beliefs about the same internal states in bipolar disorder. This paper offers support for the integrative cognitive model of bipolar disorder (Mansell et al., 2007), and suggests that further research in this area, including establishing the utility of the therapeutic approach based on the model (Mansell, 2007) is warranted.

Footnotes

1. Participants were involved in wider studies into clinical functioning, and completed this measure in the context of other self-report items. Other analyses using subsections of this sample are reported elsewhere (Mansell, 2006; Alatiq et al., 2010; Dodd et al., in press; Mansell et al., 2011).

2. The majority of the participants had participated in studies utilising the SCID-I assessment, but 60 of the participants were instead assessed using the MINI.

**CHAPTER 6: FLEXIBLE AND TENACIOUS GOAL PURSUIT LEAD TO
IMPROVING WELL-BEING IN AN AGING POPULATION: A TEN YEAR
COHORT STUDY**

Rebecca E Kelly

Alex M Wood

Warren Mansell

Manuscript submitted for publication.

Abstract

Tendencies to tenaciously pursue goals and flexibly adapt goals relate to well-being in older adults. It was hypothesised that the effects of flexibility may depend on tenacity, or vice versa. In an aging sample ($n = 5666$), the interaction between tenacity and flexibility significantly predicted depression, hostility and physical ill-health symptoms over 10 years. Highly flexible and tenacious individuals experienced the lowest symptoms. However, tenacity related to larger decreases in symptoms when flexibility was high. The combination of flexibility and tenacity may mean individuals can enjoy gains associated with goal pursuit without the detrimental effects of persevering in blocked goals.

Keywords: goal pursuit; tenacious; flexible; well-being; depression; aging.

Introduction

Tenacious goal pursuit refers to the tendency to strive for one's goals with commitment and determination, engaging in assimilative processes to modify the environment in order to achieve one's goals. Flexible goal adjustment refers to the tendency to pursue goals flexibly and disengage when necessary, engaging in accommodative processes to adjust to constraints and modify goals when there are obstacles (Brandtstadter & Rothermund, 2002). Previous research has suggested that individually both tenacious and flexible forms of goal pursuit are positively related to well-being (Brandtstadter & Rothermund, 2002). However, no previous research has tested whether the processes *interact* to predict well-being, for example, whether tenacious goal pursuit is only related to well-being when combined with flexibility. Such considerations are particularly relevant when considering an aging population. The pursuit of personal projects and goals has been found to be an important determinant of well-being and positive affect in older adults (Lawton, Moss, Winter & Hoffman, 2002). However, when older individuals are highly committed to pursuing personal goals it might be crucial that they are able to flexibly disengage from goals when necessary, as multiple obstacles to the achievement of personal goals present themselves in later life, including decreases in functioning, financial difficulties, the loss of loved ones (Lerner et al., 2003), and reduced opportunities (Heckhausen & Schultz, 1995). This paper presents the first test of whether tenacious- and flexible goal pursuit interact to predict well-being through examining changes in depression, hostility, and physical health symptoms over ten years in an aging sample of over 5,500 people initially aged 55 to 56.

Converging evidence suggests that tenacious goal pursuit may be beneficial to well-being. In both older and younger adult samples, there is a large body of

research suggesting that striving for one's goals with persistence and effort and succeeding in personal goals, relates to well being. The pursuit of meaningful goals has been found to lead to coherence and a greater sense of control (Ryff & Keyes, 1995; Wood & Joseph, 2010), and the successful pursuit of goals has been consistently related to subjective well-being (e.g., Emmons, 1996). Further, it has been argued that individuals who are optimistic about the prospects of achieving their goals might be likely to pursue their goals with more tenacity, effort, and persistence, and that this may relate to well-being (Segerstrom & Solberg-Nes, 2006). Such findings suggest that tenacious goal pursuit may positively relate to well-being. However, other research has suggested that in some situations such goal pursuit may actually be harmful to well-being. Individuals who are highly optimistic and persistent in goal pursuit tend to experience more goal conflict (Segerstrom & Solberg-Nes, 2006), which can have negative consequences for well-being (Kelly et al., 2011; Segerstrom & Solberg-Nes, 2006). Further, whilst it may be adaptive to keep striving for a goal despite difficulty, 'perserveration', the tendency to continue behaviour even if it ceases to be effective or rewarding, and 'perfectionism', the pursuit of high and rigid standards, have been found to be maladaptive (Serpell, Waller, Fearon & Meyer, 2009). Thus, it seems that tenacious goal pursuit may be most beneficial to well-being when combined with a degree of flexibility. In such cases the benefits of goal pursuit may be realised without the costs associated with continually pursuing ineffective or blocked courses of action.

The flexibility to change or discontinue behaviour when it is ineffective, for example in the case of overwhelming obstacles to goals, may in itself be important in ensuring well-being. Being confronted with unattainable goals leads to distress and low well-being (Carver & Scheier, 1990), and failing to disengage from blocked

goals is associated with rumination and the maintenance of unrealistic goals (Wrosch et al., 2003), whilst the ability to disengage from goals reduces the distress associated with repeated failure (Nesse, 2000). In line with this, Wrosch et al. (2003) stress the importance of the ability to disengage from goals and the need for new, important, valued goals in which to engage. This may be especially important in response to major stressful life events, for example, when individuals separate from their life partner in mid-life (Wrosch & Heckhausen, 1999), or discover they are unable to have children (Heckhausen, Wrosch & Fleeson, 2001). Given that aging involves a series of stressful life events (Lerner, Freedheim & Weiner, 2003), it seems particularly important that the tenacious pursuit of goals is matched with the flexibility to disengage when situationally appropriate. The present study investigates whether the interaction between FGA and TGP predicts changes in depression, hostility, and symptoms of physical illnesses across a 10-year period in a large community sample of aging adults.

Method

6.1. Participants and procedure

Participants completed the measures listed below as part of the Wisconsin project, which involved a random sample of 10317 men and women who graduated from Wisconsin high school in 1957. The average age at the start of the study was 21 ($SD = 9.76$). At multiple time points over the course of their adult lives, participants completed extensive telephone interviews and comprehensive questionnaire packs assessing various aspects of their lifestyle, occupation, financial circumstances, well-being, and health, and information was also collected from participants' family members. The present study focuses on data collected from questionnaires mailed to participants. At each collection wave, surviving participants who had participated in

the previous wave were contacted to ask them to participate in the telephone interviews and to complete the mail-out questionnaire packs. Two collection waves were of interest to this study. Time 1 refers to data collected from surviving participants from the original cohort who were contacted in 1993 and agreed to participate. Of these participants, 6875 completed the mail questionnaires. Of this number, surviving participants were then followed up ten years later, between 2002 and 2004 (Time 2). Participants whose data was incomplete ($n = 212$) were excluded, yielding a final sample of 5777 individuals who completed measures at both time points. Participants were aged between 51-56 at Time 1 and 63-67 at Time 2. Participants had 0-3 years of college education on average, the majority of participants were married (85%) and employed (66%), and 12% were retired.

6.2. Measures

Centre for Epidemiological Studies – Depression scale (CES-D; Radloff, 1977): A self-report 20-item measure of depression symptoms, e.g., “how many days in the past week did you feel unhappy”, on a scale of 0 days to 7 days. The CES-D is one of the most widely used depression measures in research (Santor, Gregus & Welch, 2006). The measure has excellent convergence with clinician ratings of depression (McDowell & Kristjansson, 1996), and Beekman, Deeg, Limbeek et al. (1997) report 100% sensitivity and 80% specificity for depression in older adult populations. A single score is appropriate for the measure (Wood & Joseph, 2010) and so a sum was calculated if the respondent answered all of the items. For participants who did not answer all items but answered at least 10 items the mean was imputed for missing values. Cronbach’s alpha for the scale was $\alpha = .90$ at Time 1 and $\alpha = .88$ at Time 2.

Hostility scale: Three items from the State Trait Anger Expression Inventory (STAXI; Spielberger, 1988) were used as a brief assessment of anger and hostility symptoms. Participants were asked how many days in the past week (0-7) they had experienced certain symptoms, e.g., “how many days in the past week did you feel angry/ hostile for several hours at a time?” Participants’ responses to the 3 items were summed, and if participants completed only 2 of the items the mean was imputed for the missing item. Cronbach’s alpha for the scale was $\alpha = .79$ at Time 1, and $\alpha = .81$ at Time 2.

Measure of physical symptoms: Participants were asked whether they had experienced 22 symptoms over the past six months, e.g., “felt a lack of energy” or “had headaches”. Each item was coded 1 for a “yes” response and 0 for a “no” response. The summary score was the number of ‘yes’ responses. The measure had excellent internal validity, with a Kuder-Richardson reliability coefficient (*KR-20*) of .77 at Time 1 and .83 at Time 2.

Flexible Goal Adjustment and Tenacious Goal Pursuit scales (FGA and TGP; Brandtstadter & Renner, 1990): Two 5-item scales, for example “If I don’t get something I want, I take it with patience” (FGA) and “I stick to my goals and projects even in the face of great adversity” (TGP). Participants rate each item on a scale of 1, “strongly agree”, to 5, “strongly disagree”, and then scores are reversed so that higher scores indicate high tenacity (TGP scale) and flexibility (FGA scale). Each scale was coded with sum, and if at least 3 of the 5 items on each scale received a response the mean of valid items was imputed for missing items. Both scales had very good internal validity, with $\alpha = .68$ for Flexible Goal Adjustment and $\alpha = .73$ for Tenacious Goal Pursuit.

6.3. Analysis

Three, three-step hierarchical linear regressions were conducted to respectively predict changes in depression, hostility and physical illness between the two time points. In each analysis Time 2 levels of the outcome variable were regressed on Time 1 levels of the variable, along with the other predictors. Thus the analysis predicts residualised changes in the outcome variable over time, or the variance in the Time 2 level of the variable that is not shared with Time 1 (Zapf et al., 1996). The three regressions performed moderation analysis as recommended by Aiken and West (1991). A term representing the interaction between Flexible Goal Adjustment and Tenacious Goal Pursuit was calculated by standardising the two scores and multiplying the summed values. The key analysis involved simultaneously regressing the outcome on flexible goal adjustment, tenacious goal pursuit, and the interaction. A significant interaction suggests that the two predictors are non-independent and interact to predict the outcome (Aiken & West, 1991). Significant interaction effects were subsequently graphed to view the nature of the interaction.

Results

Flexible Goal Adjustment and Tenacious Goal Pursuit scores at Time 1 were significantly and positively correlated, $r = .53, p < .001$.

6.4. Depression symptoms

A three-step, multiple regression analysis was performed to predict changes in depression symptoms from tenacity, flexibility, and their interaction (as well as covariates) (see Table 6.1). The first step significantly predicted T2 depression ($F(4, 5777) = 516.30, R^2 = .26, p < .001$) from the covariates of age, education, gender, and T1 depression, each of which was a significant unique predictor. In the second

step, tenacious goal pursuit and flexible goal adjustment were entered, resulting in a significantly improved model ($\Delta F = -165.47$, $\Delta R^2 = .004$, $p < .001$); both variables were unique negative predictors. However, entering the interaction in the third step further improved the model ($\Delta F = -45.81$, $\Delta R^2 = .003$, $p < .001$), with the interaction term reaching significance. This suggests that the relationship between tenacious goal pursuit and changes in depression systematically differs depending on the level of flexibility (and equally, that the relationship between flexibility and changes in depression systematically depends on the level of tenacious goal pursuit). The nature of this interaction is graphed in Figure 6.1. When flexibility is low, tenacity leads to relatively small decreases in depression ($r = -.10$). In contrast, when flexibility is high, tenacity leads to larger decreases in depression ($r = -.18$). Simple slope analysis revealed that whilst both gradients differed significantly from zero, the relationship between tenacity and changes in depression is 70% higher when flexibility is high compared to when it is low, and the significant interaction indicates that this difference is statistically significant. The same pattern of findings also emerged when comparing the effect of flexible goal adjustment on changes in depression symptoms at high and low levels of tenacious goal pursuit.

6.5. Hostility symptoms

A three-step, multiple regression analysis was performed to predict changes in hostility symptoms from tenacity, flexibility, and their interaction (as well as covariates) (see Table 6.1). The first step significantly predicted T2 hostility ($F(4, 5776) = 216.69$, $R^2 = .14$, $p < .001$) from the covariates of age, education, gender, and T1 hostility symptoms. Only T1 hostility was a significant unique predictor. In the second step, tenacious goal pursuit and flexible goal adjustment were entered, resulting in a significantly improved model ($\Delta F = -65.33$, $\Delta R^2 = .006$, $p < .001$).

Flexible goal adjustment was a significant negative predictor, but tenacious goal pursuit was not significant. In the third step, entering the interaction significantly improved fit ($\Delta F = -19.32$, $\Delta R^2 = .002$, $p < .001$), with the interaction term reaching significance. This suggests that the relationship between tenacious goal pursuit and changes in hostility symptoms differs systematically depending on the level of flexible goal adjustment (and equally, that the association between flexibility and changes in hostility over time systematically depends on the level of tenacity). This interaction effect is graphed in Figure 6.1. When flexibility is low, tenacity leads to small decreases in hostility symptoms ($r = -.03$). However, when flexibility is high, tenacity leads to considerably larger decreases in hostility ($r = -.10$). Simple slope analysis revealed that the relationship between tenacity and changes in hostility symptoms is 91% higher when flexibility is high versus when flexibility is low. The significant interaction indicates that this difference is statistically significant. The same pattern was found when examining the effect of flexible goal adjustment on changes in hostility symptoms at high and low levels of tenacious goal pursuit.

6.6. Physical ill-health symptoms

A three-step, multiple regression analysis was preformed to predict changes in physical illness symptoms from tenacity, flexibility, and their interaction (as well as covariates) (see Table 6.1). The first step significantly predicted T2 symptoms ($F(4, 5777) = 458.20$, $R^2 = .24$, $p < .001$) from the covariates of age, education, gender, and T1 illness symptoms. Only symptoms at T1 were a significant predictor in this step. In the second step, tenacious goal pursuit and flexible goal adjustment were entered, resulting in a significantly improved model ($\Delta F = -148.46$, $\Delta R^2 = .004$, $p < .001$). Flexible goal adjustment was a significant negative predictor, but there was no significant effect of tenacious goal pursuit on changes in illness symptoms. In the

third step, entering the interaction in the third step significantly improved fit ($\Delta F = -30.38$, $\Delta R^2 = .003$, $p < .001$) and the interaction term was a significant predictor. This indicates that the relationship between tenacious goal pursuit and changes in symptoms of physical ill-health systematically depends on individuals' level of flexibility (and equally, that the relationship between flexible goal adjustment and changes in illness symptoms also systematically depends on the level of tenacity). The interaction is graphed in Figure 6.1. When flexibility is low, tenacity leads to relatively small decreases in illness symptoms ($r = -.04$). However, when flexibility is high, tenacity leads to larger decreases in physical illness symptoms ($r = -.13$). Analysis of the simple slopes reveals that the association between tenacity and changes in illness symptoms when flexibility is high is 88% higher than when it is low. Again, the significant interaction indicates that this difference is statistically significant. The same pattern was found when comparing the relationship between flexible goal adjustment and changes in symptoms of physical ill-health at high and low levels of tenacious goal pursuit.¹

Table 6.1.

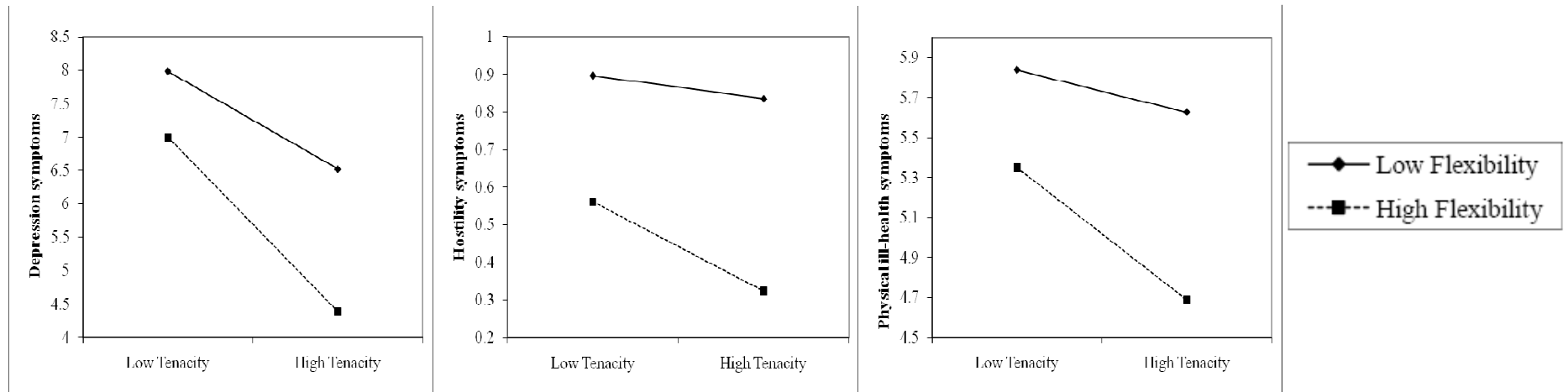
Regression analyses on changes in depression, hostility and physical illness symptoms

	Step 1			Step 2			Step 3		
	B	beta	P	β	Beta	p	β	beta	p
Depression T2									
T1 symptoms	.50	.50	.00	.49	.48	.00	.47	.47	.00
Age	-.05	-.03	.03	-.05	-.03	.02	-.05	-.03	.02
Gender	.10	.05	.00	.10	.05	.00	.10	.05	.00
Education	-.02	-.05	.00	-.02	-.05	.00	-.02	-.05	.00
Flexibility				-.04	-.04	.00	-.07	-.07	.00
Tenacity				-.03	-.03	.02	-.06	-.06	.00
Interaction							-.02	-.07	.00
Hostility T2									
T1 symptoms	.38	.36	.00	.35	.35	.00	.35	.34	.00
Age	.00	.00	.87	.00	.00	.89	.00	.00	.91
Gender	.05	.02	.08	.06	.03	.03	.06	.03	.03
Education	-.01	-.02	.08	-.01	-.02	.07	-.01	-.02	.07
Flexibility				-.09	-.07	.00	-.10	-.10	.00
Tenacity				-.01	-.01	.70	-.03	-.02	.12
Interaction							-.02	-.06	.00
Physical Symptoms T2									
T1 symptoms	.49	.49	.00	.49	.48	.00	.48	.48	.00
Age	-.02	-.02	.08	-.04	-.02	.08	-.04	-.02	.08
Gender	.01	.01	.28	.03	.02	.18	.03	.02	.15
Education	-.02	-.02	.12	-.01	-.02	.14	-.01	-.02	.12
Flexibility				-.05	-.04	.00	-.07	-.07	.00
Tenacity				-.01	-.01	.41	-.04	-.04	.01
Interaction							-.02	-.07	.00

Note. T1 refers to Time 1 or baseline, T2 refers to Time 2 or follow-up. Significant effects ($p < .05$) in bold.

Figure 6.1.

Graph depicting the effect of the interaction between tenacious goal pursuit and flexible goal adjustment on changes in symptoms of depression, hostility and physical ill-health



Discussion

The interaction between tenacious goal pursuit and flexible goal adjustment predicted symptoms of depression, hostility and physical ill-health over time in an aging sample, over and above the effects of demographic variables, and controlling for baseline symptoms. Inspecting the interaction effects revealed that individuals who were high in both flexibility and tenacity experienced lower levels of depression, hostility and ill-health symptoms. However, the impact of tenacity on changes in symptoms of ill-being was greater at high levels of flexibility, and for two of the three outcome measures did not reach significance at low levels of flexibility. This effect also applied in reverse; the effect of flexible goal adjustment on well-being was greater at high levels of tenacity. This is in line with the suggestion that tenacious goal pursuit is most beneficial to well-being when combined with a higher degree of flexibility in goal adjustment. It is argued that this is because for individuals high in both tenacity and flexibility, they can enjoy the positive benefits of goal pursuit without experiencing the detrimental effects of persevering in ineffective or blocked courses of action.

If this research had not tested for an interaction effect and had instead considered main effects alone, the conclusion could have been drawn that that flexibility was more important than tenacity in predicting changes in well-being, as the main effects suggested tenacity did not significantly independently predict on hostility or illness symptoms. However, in the presence of a significant interaction effect, main effects cannot be interpreted, and the interaction indicates that tenacity *did* effect changes in well-being symptoms, but only at high levels of flexibility. This finding calls into question the previous research that has suggested that flexible goal adjustment may be more important in determining well-being in older adults (e.g.,

Bouerner, 2003; Brandstadter, Wentura & Greve, 1993), and highlights the importance of considering and testing for interaction effects between variables such as tenacity and flexibility.

The findings of this study extend the existing literature and support the model proposed by Brandstadter and Renner (1990), which suggests that both flexibility and tenacity in goal pursuit are important for well-being. However, the findings offer an important extension to the existing research and indicate that whilst tenacity and flexibility may represent distinct coping styles, in line with Brandstadter and Renner's proposal (1990), they do not seem to contribute independently to well-being, but rather they interact to predict well-being.

This study is limited by a reliance on self-report measures of flexibility and tenacity and of the well-being measures. However, the depression measure has previously been found to converge with physician ratings of depression in older adult populations, with 100% sensitivity and 80% specificity (Beekman et al., 1997). Future research could extend these findings, perhaps using peer ratings of individuals' flexibility and tenacity in their goal pursuit, or other outcome measures. The study utilised an older adult sample, as the concepts of interest were proposed to be of particular relevance to well-being in this population. However, more research is needed to establish whether these findings generalise to other age groups. Finally, the effect sizes of the slope differences were relatively small, although the effect size for depression was more substantial than for hostility and physical illness symptoms. However, the effects are of a reasonable magnitude given the long-term follow-up period, and the hypothesis that flexible goal adjustment and tenacious goal pursuit interact to predict well-being was supported for each of the three well-being indices. Most importantly, the interaction effect, which is independent of effect size, reached

statistical significance in all three models, even when controlling for demographic variables.

If these findings are replicated, then they may have implications for the understanding of psychological and physical ill-being, and potentially have implications for interventions. For individuals experiencing distress or low well-being, it might be helpful to consider the extent to which they are tenacious or flexible in their goal pursuit. Psychologists could also consider developing interventions which involve encouraging individuals to be more tenacious or flexible in their goal pursuit. There may be certain scenarios in later life when this could be especially helpful and important. For example, in older adulthood, one major cause of low-well being and psychological distress is changes in physical health and functioning (e.g., Lerner et al., 2003). Professionals supporting individuals confronted with such changes, for example, the receipt of a diagnosis of a chronic or long-term health condition, could explore the personal goals that are important to this individual, helping them to either consider new ways to achieve certain goals, or encouraging them to adapt their goals and engage with different, more achievable goals. This form of intervention has previously been found to be effective; the outcomes were equally good for individuals who completed a computer programme (Gould, 1989), which encouraged them to think about their goals, obstacles to goal achievement, and ways to achieve their goals, to the outcomes in individuals who saw a professional therapist (Jacobs, 1995, cited by Bohart, 2000). Techniques which facilitate goal focus and reflection could also be incorporated in existing psychological treatments, for example, Karoly (1993) proposes that a motivational perspective based on an understanding of individuals' dynamic and changing personal goals systems can aid assessment and the planning of psychological

intervention. Clinicians may benefit from applying the concepts of flexibility and tenacity in goal pursuit when considering how to intervene to improve the well-being of older adults. Future research should also consider the wider relevance of these concepts to well-being.

Footnote

1. For brevity and clarity, the results are only reported for the relationship between tenacious goal pursuit and symptoms at high (+1 *SD*) and low (-1 *SD*) levels of flexible goal adjustment. The same pattern of findings was obtained for the effect of flexibility on symptoms at high and low levels of tenacity.

CHAPTER 7: ENCOURAGING ACCEPTANCE OF AMBIVALENCE USING THE EXPRESSIVE WRITING PARADIGM

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Encouraging acceptance of ambivalence using the expressive writing paradigm.

Psychology and Psychotherapy: Theory, Research and Practice.

Abstract

Ambivalence is regarded as a key target for psychotherapeutic change. This study aimed to examine the effectiveness of a brief expressive writing intervention for reducing distress about goal ambivalence. A sample of 40 undergraduate students were randomly allocated to an experimental 'expressive writing' condition or a control condition. Participants rated their ambivalence about the ten most important goals they were currently pursuing and rated how distressing they found these feelings of ambivalence. Participants then completed three short expressive writing sessions on consecutive days. Participants in the experimental condition participants wrote about their deepest thoughts and feelings relating to their ambivalence, and participants in the control condition wrote about how they had spent their time that day or week. When controlling for baseline distress about ambivalence, there was a significant effect of writing condition on distress about ambivalence at follow-up; individuals who wrote about their ambivalence experienced a significant reduction in their level of distress about ambivalence. It was concluded that expressive writing might represent an analogue of therapeutic approaches to encourage acceptance of ambivalence.

Keywords: Goals; ambivalence; conflict; expressive writing; distress

Introduction

Ambivalence is a state or trait variable often broadly described as an approach-avoidance conflict; an individual can simultaneously desire and wish to avoid a particular person, object or experience; and this ambivalence frequently leads to distress (Sincoff, 1990). The present study explored whether an expressive writing intervention could reduce individuals' ambivalence about the goals they are pursuing, or their distress about this ambivalence. The term 'ambivalence' was coined by Bleuler (1911, as cited by Kwapil, Raulin & Midthun, 2000) to refer to contradictory feelings of love and hate directed simultaneously toward the same thing. Over the subsequent century, numerous researchers and clinicians have cited the relevance of ambivalence for psychological distress. The construct of ambivalence has recently gained new status amongst researchers and practitioners in the field of clinical psychology following the influence of Miller and Rollnick's (1991) seminal work on Motivational Interviewing, which placed feelings of ambivalence at the heart of motivational problems.

Ambivalence is also a major target for change in psychological therapy. Sincoff (1990) argues that "recognising ambivalent conflicts and working towards resolution or acceptance of such conflicts constitutes a major psychotherapeutic task" (p. 48). A number of therapeutic approaches explicitly target ambivalence (e.g. Binder, 1999; Miller & Rollnick, 1991; Perls, 1969), further highlighting the relevance of ambivalence for psychopathology. Hoyer et al. (2001) demonstrated that patients' conflict and psychological symptoms could be reduced through psychological therapy and argued that therapy is effective because it targets patients' ambivalence.

Ambivalence can be assessed by asking individuals how unhappy they would be if they succeeded in the goals that they are pursuing (e.g. Emmons & King, 1988); ambivalence can be inferred if an individual is consciously pursuing a goal and also conscious that they would not be completely happy if they achieved it. Emmons and King (1988) demonstrated that ambivalence about pursuing one's strivings or goals is related to both psychological and physical ill-health.

Psychotherapeutic approaches to reducing ambivalence, or distress caused by ambivalence, often focus on increasing an individual's awareness of, or insight into, their ambivalence. Mozdierz, Peluso and Lisiecki (2009) propose that in order for change to occur in therapy, clients have to be aware of and understand their problem and have a 'meta-awareness' of their ambivalence. Hanna (2002) argues that insight is a crucial part of psychotherapeutic change; individuals must recognise or perceive a problem by bringing the issue in from the edge of their awareness.

Expressive writing involves disclosing through writing one's deepest thoughts and feelings about a problem or traumatic event (e.g. Pennebaker, 1994). Pennebaker (1997) argued that the effects of written disclosure are comparable to verbal disclosure and suggested that through disclosure of a problem or issue, individuals can develop insight and awareness. If therapeutic approaches facilitate the resolution or acceptance of ambivalence through increased awareness and insight, then expressive writing about ambivalence should direct individuals' awareness towards their deepest thoughts and feelings about their ambivalence. This, in turn, should have the effect of either reducing ambivalence, or encouraging individuals to accept their ambivalence and thus reducing associated distress.

There is a wealth of literature supporting the positive effects of 'expressive writing' about a problem or issue on well-being (e.g. Sloan & Marx, 2004). The first

expressive writing study (Pennebaker & Beall, 1986) found that writing about traumas decreased physician visits and aspirin usage over time, compared with writing about superficial topics. In the two subsequent decades, over 150 further journal articles were devoted to the study of the effects of expressive writing on psychological well-being, as well as objective health outcomes (Pennebaker & Chung, 2007). More recently, Horn, Pössel and Hautzinger (2010) found that a combination of expressive writing and psychoeducation about emotion-regulation improved affect and school-related outcomes in an adolescent sample. Horn et al. (2010) suggested that writing may represent a mode of cognitive-affective coping that replaces dysfunctional techniques, for example suppression or rumination, indicating the potential application of writing interventions to depression and anxiety, which are often characterised by these dysfunctional coping techniques.

Whilst much of the research has focused on the effects of writing about trauma, studies have also shown that writing about the perceived benefits of trauma (King & Milner, 2000), intensely positive experiences (Burton & King, 2004) and a self-regulatory topic, one's best possible future self (King, 2001), can be beneficial. It would appear that the benefits of expressive writing are not restricted to writing about traumatic experiences. The expressive writing paradigm might represent an analogue of therapeutic approaches to reducing individuals' ambivalence or distress about their ambivalence. Indeed, a wide range of writing-based interventions have been developed, including computerised tasks, with great therapeutic application and value (Lepore & Smyth, 2002). Pennebaker (1997) argues that psychological therapies may be apparently equally effective because it is the mere act of disclosure, labelling and discussing a problem, which is helpful, and argues that if this is the case disclosure through writing may have similar benefits to therapy. It is proposed

that disclosure may be beneficial for a number of reasons including reduction in inhibition and cognitive change (Pennebaker, 1997).

The present study adapted Pennebaker's expressive writing paradigm to encourage participants to explicitly consider their thoughts and feelings about their ambivalence and assessed the effects of writing about ambivalence on the level of ambivalence and distress about ambivalence at three-week follow up. As this research involves the first test of a novel application of the expressive writing technique, the study utilises a modest non-clinical sample, in order to first explore the benefits of the intervention in an analogue sample with a range of distress symptom severities. It was hypothesised that expressive writing about ambivalence would be associated with a reduction in participants' ambivalence and/ or in the extent to which they found ambivalence distressing.

Method

7.1. Participants

40 undergraduate students (36 female) with an average age of 18.60 ($SD = 8.00$) were recruited through the university research participation scheme and received course credits for participation. All participants gave informed consent and were debriefed at the end of the study.

7.2. Materials

The *Strivings Ambivalence* measure (Emmons & King, 1988) was used to assess participants' goal ambivalence. Participants were asked about each of their listed goals; "how unhappy would you be if you succeeded at this striving", on a scale of 0, "not unhappy at all", to 5, "extremely unhappy". This measure of ambivalence has previously been found to have 1-year test-retest reliability of $r = .65$

and to correlate with anxiety ($r = .37$), depression ($r = .44$), and negative affect ($r = .39$) (Emmons & King, 1988).

The *Depression, Anxiety and Stress Scale (short form) (DASS-21)* (Lovibond & Lovibond, 1995): A 21-item measure of symptoms of stress, anxiety and depression. Participants rated their agreement with statements such as “I found it difficult to relax” on a scale of 0, “did not apply to me at all”, to 3, “applied to me very much/ most of the time”. The depression subscale correlates with the Beck Depression Inventory ($r = .79$) and the anxiety subscale correlates with the Beck Anxiety Inventory ($r = .85$) (Antony et al., 1998). Cronbach’s alpha was $\alpha = .83$ at baseline and $\alpha = .91$ at follow-up.¹

7.3. Procedure

Participants were asked to list ten of their personal goals, “things you typically attempt to achieve or attain, or typically attempt to avoid doing”, and rate their ambivalence about each goal. Participants were then asked, “Where you have stated that you might be unhappy to some degree even if you were successful in one or more of these goals; how distressing do you find this?”, and asked to respond on a likert scale labelled from 0, “not at all distressing”, to 10, “highly distressing”.

Participants were randomly allocated to one of two conditions, expressive writing ($n = 20$) and control ($n = 20$). In the expressive writing condition, participants were asked to write about one of their goals that they believed might cause them some degree of unhappiness even if they were successful in achieving it (an ambivalent goal). They were asked to write about their “very deepest thoughts and feelings” about this ambivalence and were told to keep writing for the 20 minute period. It was suggested that they write about significant experiences and how the goal relates to other aspects of their life, including relationships with others, their

childhood and their future (for more detail on the expressive writing instructions, see Pennebaker, 1994).

In the control condition, participants were asked to write about how they used their time including tasks they carried out, where they went, and who with. It was highlighted that they should be as accurate as possible. They were asked to write on day 1 about how they used their time on the previous day, on day 2 about how they would use their time for the rest of that day, and on day 3 about how they would use their time over the course of the next week.

In both conditions, participants wrote for 20 minutes, for three consecutive days. Participants wrote in private rooms and the experimenter knocked on the door to indicate when 20 minutes had passed. Participants placed their writing sheets into a box before the experimenter re-entered the room and were assured that what they had written would remain anonymous. Three weeks later, all participants were asked to consider their original list of ten goals and rate them for ambivalence and rate their distress about their ambivalence.

Examples of ambivalent conflict descriptions in participants' writing included, "I don't want to change myself... but I still have to because I don't want to be lonely", "[I want to] make my mum happy and proud so she is not too disappointed, but it's tiring [and means] doing things I don't want to do".

Results

7.4. Descriptive statistics

The experimental and control groups did not differ in terms of age, gender, baseline psychological symptoms as measured by the DASS-21, baseline ambivalence or baseline distress about ambivalence; all t-tests were non-significant. Mean symptom, ambivalence and distress scores at baseline and Time 2 are

displayed in Table 7.1. Mean scores on depression, anxiety and stress were below clinical significance, but when comparing scores to clinical cut off scores (Lovibond & Lovibond, 1995) 12 participants were mildly depressed, 9 were moderately depressed, 3 were mildly anxious, 9 were moderately anxious, 7 were severely anxious, 7 were mildly stressed and 3 were moderately stressed. Thus, whilst this was an analogue sample, over half of the participants were experiencing significant distress. Correlations between variables are reported in Table 7.2.

Table 7.1.

Means and standard deviations of measures by group

	Time 1				Time 2			
	Control		Experimental		Control		Experimental	
	<i>(n = 20)</i>		<i>(n = 20)</i>		<i>(n = 20)</i>		<i>(n = 20)</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Depression	3.15	2.43	3.15	2.8	3.4	2.76	2.75	2.79
Anxiety	3.55	3.07	3.1	3.04	4.15	4.32	3.00	3.57
Stress	5.9	4.14	6.2	3.14	6.2	4.51	5.20	2.98
Ambivalence (mean)	1.14	0.59	1.23	0.72	1.04	0.50	1.21	.70
Distress about Ambivalence	5.95	2.44	5.9	1.83	5.45	2.16	3.95	2.52

Table 7.2.

Correlations between variables

	T1 DASS	T1 Ambivalence	T1 Distress about ambivalence	T2 DASS	T2 Ambivalence	T2 Distress about ambivalence
T1 DASS	1					
T1 Ambivalence	-.06	1				
T1 Distress about ambivalence	.44**	-.15	1			
T2 DASS	.62**	.03	.46**	1		
T2 Ambivalence	.01	.25	.12	.00	1	
T2 Distress about ambivalence	.24	.05	.41**	.31*	.11	1

Note. $N = 40$, * $p < .05$, ** $p < .01$

7.5. Goals generated by participants

The ambivalent strivings participants chose to write about were generally abstract, high-level goals, relating to emotions or relationships and important goals and needs (Wallenius, 2000). For example, “make my mum proud”, “avoid confrontation”, “forgive others”, “change myself to fit in”, “be more confident”, and “please others”.

7.6. Effects of expressive writing intervention

Distress about ambivalence was normally distributed and box plots revealed no outliers. Distress about ambivalence was significantly and positively correlated with total DASS-21 scores (Table 7.2). The means suggested that distress about ambivalence decreased over time for the expressive writing group, but not for the control group. This was tested using an ANCOVA, which revealed a significant effect of writing condition on distress about ambivalence at follow-up, such that distress about ambivalence at Time 2 was significantly lower in the experimental condition ($M = 3.95$, $SD = 2.52$) than the control condition ($M = 5.45$, $SD = 2.16$), when controlling for distress about ambivalence at Time 1, $F(1, 37) = 4.70$, $p = .037$. The effect size was medium to large, Cohen’s $d = -0.69$.

Mean ambivalence ratings were normally distributed and box plots revealed no outliers. An ANCOVA revealed no significant effect of condition on changes in levels of ambivalence over time, $F(1, 37) = 0.59$, $p = .45$, ambivalence was no lower at Time 2 for the experimental group ($M = 1.20$, $SD = 0.13$) than the control group ($M = 1.05$, $SD = 0.13$). The effect size was small, $d = 0.24$.

7.7. Manipulation check

Writing scripts were reviewed to ensure participants had followed the instructions in both conditions. It was hypothesised that if participants had followed

the instructions, participants in the experimental condition would have written about ambivalent conflicts frequently, whereas participants in the control condition would not have written about conflict. Two independent raters rated the scripts of all three writing sessions from all 40 participants. Both raters were blind to participants' ratings of ambivalence, distress about ambivalence, symptoms, and other measures. The raters classified any instances where the person expressed two opposing feelings, goals, or values relating to the same issue, such that what they were describing could be expressed as an "x however y" or "x but y" statement, as instances of conflict. Examples of the types of descriptions rated as instances of conflict in participants' writing include, "I don't want to change myself... but I still have to because I don't want to be lonely", "[I want to] make my mum happy and proud so she is not too disappointed, but it's tiring [and means] doing things I don't want to do". Inter-rater reliability was tested with an intra-class correlation of absolute agreement, based on a two-way mixed ANOVA, with rater as a fixed factor.

The level of inter-rater agreement for ratings of the frequency of conflict descriptions in participants' scripts was significant, $F(39, 39) = 14.29, p < .001$ and high ($r^{icc} = .84$). An independent samples t-test was used to test whether participants in the experimental condition discussed conflict more frequently in their writing. The t-test was significant, $t(19, 94) = 11.16, p < .001$, participants in the experimental condition discussed conflict more frequently in their writing than those in the control condition.

Discussion

The present study demonstrated that feelings of distress relating to ambivalence about pursuing goals reduced significantly over a three-week follow up period for individuals who spent time writing about their deepest thoughts and

feelings about their ambivalence, but not for individuals who wrote for the same length of time about the control topics (e.g., what they had done that day).

Expressive writing appears to be an effective intervention to reduce distress about goal-related ambivalence. It may be that often individuals are not aware of the reasons for their feelings of ambivalence about their goals; they simply become aware that they would not be entirely happy if they succeeded in their goals when asked to rate their ambivalence and find this distressing. Spending time writing about thoughts and feelings about this ambivalence might enable individuals to understand their feelings of ambivalence.

The reduction in distress about ambivalence observed in the present study could be interpreted as indicating that expressive writing encourages or facilitates acceptance of ambivalence; if the same level of goal-related ambivalence remains, but the individual is no longer as distressed by it, then it may be that the individual has accepted or begun to tolerate the ambivalence. Learning through writing about one's ambivalence to tolerate this ambivalence, despite the ambivalence itself remaining, might be a sign of developing maturity.² Therapeutic approaches often aim to promote acceptance of ambivalence when resolution is not possible (Mozdzierz et al., 2009; Sincoff, 1990). Thus, expressive writing could potentially be used as a therapeutic technique to encourage acceptance. Further research could attempt to elaborate the process underlying this reduction in ambivalence-related distress and also explore and discern whether expressive writing can facilitate acceptance of other problems or issues.

Expressive writing about ambivalence did not lead to a reduction in individuals' actual levels of ambivalence. However, whilst correlational analyses (Table 7.1) show that actual ratings of ambivalence were not related to either

symptoms of distress or distress about ambivalence at either Time 1 or Time 2, distress about ambivalence was positively correlated with a well-validated measure of distress at both Time 1 and Time 2, suggesting that ambivalence per se is not distressing. Distress caused by ambivalence may depend on the extent to which goals conflict with one another (Kelly et al., 2011). Thus, the lack of change in actual ambivalence levels is not seen to be problematic, because the intervention reduced the aspect of ambivalence that was correlated with psychological symptoms; distress about ambivalence. Further, participants' ambivalence at follow-up was assessed by presenting participants with their original list of goals. It is possible that following the expressive writing task participants decided to change or reprioritise their goals, so when presented with their previous list of goals they rated them as equally ambivalent, but reported less distress. For example, if someone realised they were not completely happy about pursuing the goal of 'trying to get promoted at work' and through expressive writing focused their awareness on why they felt this way, they might later change or abandon this goal. Prochaska's transtheoretical model of the stages of change (e.g., Prochaska & DiClemente, 1983; Prochaska & Velicer, 1997) might conceptualise this as moving from the 'precontemplation' stage to the 'contemplation' or 'action' stage; a change which could arise through the increased awareness afforded by the expressive writing process. Future studies could address these possibilities.

This first study into the potential utility of an expressive writing intervention for ambivalence is limited by its modest sample and the fact that participants were not selected on the basis of clinical symptoms. In addition, the outcome measure was a single self-report item. Peterson (2001) has advised that researchers exercise caution in extending conclusions from research conducted solely on student samples

to non-student samples. However, over half of the participants in this sample had mild-moderate depression, anxiety or stress symptoms, and there is accumulating evidence that expressive writing is beneficial for physical and psychiatric health (Frisina, Borod & Lepore, 2004). It has been argued that expressive writing has great potential as a therapeutic tool either as an adjunct to therapy or as a means of self-help, and benefits have been observed when writing has been used as a form of therapy, from email-based writing about traumatic events to writing tasks for couples distressed by extra-marital affair (Baikie & Wilhelm, 2005). Future research should extend the present study by testing the effectiveness of expressive writing about ambivalence in larger or clinical samples and by using other outcome measures.

In conclusion, the present study demonstrates that expressive writing about ambivalence can significantly reduce distress about ambivalence, potentially through encouraging acceptance of this ambivalence. Expressive writing may represent a useful therapeutic technique for encouraging acceptance of ambivalent conflicts.

Footnotes

1. Additional data (available from the authors on request) were collected using other measures for the purpose of separate analyses which, for the sake of brevity, are not reported here.
2. The authors thank an anonymous reviewer of a previous draft for this insight.

**CHAPTER 8: CLIENT READINESS AS A PREDICTOR OF SESSION BY
SESSION THERAPEUTIC CHANGE: IS IT IMPORTANT AND HOW DO
WE ENHANCE IT?**

Rebecca E. Kelly

Marijke Lansbergen

Miriam Samad

Alex M. Wood

Warren Mansell

Tim Carey

Sara Tai

Abstract

Previous research has suggested common factors may explain the symptom improvements seen across a range of psychological therapies. It was hypothesised that client readiness to discuss their problem openly, engage in therapy, and change perspectives on their problem, might represent one such factor. A sample of 30 individuals experiencing a wide range of psychological difficulties received Method of Levels therapy (MOL), a novel form of transdiagnostic cognitive therapy. Multi-level analysis was used to explore predictors of symptom change across participants on a session-by-session basis. A measure of client readiness significantly predicted symptom improvements between sessions, controlling for therapeutic alliance, therapist adherence to MOL, client satisfaction and demographic variables. Alliance, adherence and satisfaction did not predict symptom change. However, the client's perception of the working alliance and the therapist's adherence to the principles of MOL significantly predicted session-by-session changes in client readiness. It was concluded that client readiness is an important determinant of therapeutic change, and therapists may be able to foster this readiness by building a good working alliance with the client and by adhering to the core principles of MOL. Enhancing readiness in this way may improve the effectiveness of therapy.

Introduction

It has been proposed that different psychological therapy approaches are similarly effective (e.g., Luborsky et al., 2002; Wampold et al., 1997), which has given rise to discussions on the ‘Dodo bird’ effect; the argument that “all are equal and all shall have prizes”. However, a number of researchers disagree that therapeutic approaches are equivalent (e.g., Beutler, 2002; Crits-Cristoph, 1997; Norcross, 1995), and there is disagreement over whether similarities are due to non-specific effects or theory-driven, specific processes (e.g., DeRubeis, Brotman & Gibbons, 2005). Rosenzweig first suggested 75 years ago that the small differences in outcome across diverse therapeutic approaches are due to the pervasiveness of common factors and processes (Rosenzweig, 1936). However, this topic is still being debated (e.g., Mansell, 2011). It is important to elucidate these common factors or processes which lead to psychotherapeutic change, so that more effective and efficient interventions can be developed which capitalise on this process by prioritising the more active components of therapy. It is hypothesised that client readiness to change might represent one such process.

Previous research has suggested a number of factors and processes, which may facilitate therapeutic change. Researchers have explored the non-linear dynamics of change, and argued that sudden gains (e.g., Hardy et al., 2005; Tang, DeRubeis, Beberman & Pham, 2005; Vittengl, Clark & Jarrett, 2005) or early gains or improvements (Busch et al., 2006) predict outcome. However, the question of what influences these gains remains unanswered. Other research has looked at potential mediators of symptom improvements in therapy, such as reductions in negative cognitions or cognitive change and insight (e.g., Garratt, Ingram, Rand & Sawalani, 2007; Tang et al., 2005). Positive associations have been found between

therapist adherence to treatment principles and outcome (e.g., Feeley, DeRubeis & Gelfand, 1999). Client satisfaction has also been found to relate to outcome (Perry & Bond, 2009). Finally, it has been argued that it is the therapeutic relationship or working alliance that is important in influencing change (Horvath & Bedi, 2002), over and above adherence to specific treatment principles (e.g., Trepka, Rees, Shapiro, Hardy & Barkham, 2004). However, it is argued that these factors may simply facilitate other important change processes.

Recent discussions on the theme of common factors predicting psychotherapeutic change have emphasised the importance of client factors, as opposed to therapist or therapy factors (e.g., Bohart, 2000). Theoretically, in order for change to occur in therapy, the client should feel able to be open in their discussion of their current problems with the therapist (Carey, 2006), feel motivated to engage in therapy (e.g., Zuroff, Koestner, Moscovitz, McBride, Marshall & Bagby, 2007), and feel a sense of control over their participation in therapy (Higginson et al., 2011). Further, even in the context of natural, unassisted recovery, the extent to which someone is willing to face their problem and willing to make changes has also been argued to be crucial (e.g., Prochaska, DiClemente & Norcross, 1992). Thus, the extent to which clients feel ‘ready’ to engage fully in therapy, by discussing their problem openly with the therapist, answering the therapist’s questions, and considering new ways of viewing their problem, may be an important factor in determining the extent to which they will benefit from therapy.

One therapeutic approach, Method of Levels therapy (MOL; Carey, 2006; Powers, 1973), may be particularly effective in developing readiness to change, because clients are given greater control over their participation in therapy than in many other approaches. In MOL there is no extensive assessment and formulation

period, and therapists do not offer advice or interpretation. Instead, the client chooses the focus of each therapy session, the extent to which they disclose their problems, and the frequency and number of therapy sessions. The MOL approach is based on the principles of control theory (Carver & Scheier, 1982; Powers, 1973). Crucially, it is assumed that psychological distress arises from obstacles or conflict in an individual's hierarchy of personal goals (Powers, 1973). Further, it is assumed that when therapists' own goals or perspective guide the focus or progression of therapy, the therapist's goals can conflict with those of the client, which may 'get in the way' of progress (Carey, 2006).

Based on the assumptions above, MOL therapy involves encouraging clients to talk about and sustain their attention towards their thoughts and feelings about a personally-relevant problem. Through this method, it is designed to help individuals become aware of their conflicting goals and draw on their intrinsic capacities for problem-solving and reappraisal (Carey, 2006; 2008; 2009). It has been compared to recent therapies that promote 'metacognitive' or 'mindful' awareness, yet taken from a client-centred perspective (Mansell, 2009). There is existing evidence from naturalistic studies that this therapeutic approach is associated with reductions in distress that are maintained at three-month follow-up (Carey, 2008; Carey & Mullan, 2008).

This study sought to explore whether client readiness, defined as the extent to which client's feel ready to discuss their problem, answer the therapist's questions, and potentially change the way they view their problem, was a significant predictor of session-by-session change. A further aim was to test whether therapist adherence to the MOL approach might predict increases in client readiness. This research aimed to test whether these relationships would be maintained when controlling for a

number of other factors previously argued to be important in predicting change over the course of therapy: client- and therapist-rated therapeutic alliance, client satisfaction, and the timing of the individual session (i.e., whether it occurred earlier or later in the course of therapy). These relationships were explored across range of psychological problems, treatment durations and session frequencies, in an NHS Primary Care setting with therapists with varying levels of experience, with a view to establishing common factors that predicted improvements irrespective of these factors. MOL therapy was well suited to this approach because it is an efficient, accessible, easily trainable, client-centred form of cognitive therapy, which can be applied to a range of presenting problems (Mansell, 2009). Clients were given freedom to dictate the frequency of sessions and the number of sessions they attended, as it has been suggested that MOL is most successful when clients have control over these factors (Mansell, 2009). Dobson (2009) argues there is a need for process research which considers processes in a session and symptom improvements following that session. In line with this, the analytic strategy was to explore the features of 'session n' that predict the change in symptoms between 'session n' and 'session n+1', which enabled the exploration of the importance of different variables across participants and sessions and regardless of the stage of therapy 'session n' occurs at.

Method

8.1. Participants and procedure

In total, 30 participants attended at least two therapy sessions, and these participants form the sample for this study. The majority of the sample were female ($n = 20$). Participants were aged from 18-72 with a mean age of 40 ($M = 39.64$, $SD = 14.27$). The majority of the participants were White British; one participant was

French but had lived in the UK for most of her life and spoke English as her first language. Of the 30 participants, 9 attended 2 sessions, 5 attended 3 sessions, 6 attended 4 sessions, and 10 participants attended 5 or more sessions. These figures do not necessarily represent the final number of therapy sessions attended for some participants. Separate analyses based on a subset of these participants and including participants who attended only one therapy session is reported in Lansbergen (2011).

Participants were recruited from an NHS Primary Care Mental Health Trust from individuals referred by their General Practitioner for psychological therapy. Participants presented with problems across a range of topics including low mood, social anxiety, anger control, unresolved grief, stress, perfectionism, eating disorder, obsessive compulsive disorder, along with depression and frustration as a result of pain and physical limitations (e.g., fibromyalgia) or chronic health difficulties (e.g., diabetes). Participants received Method of Levels Cognitive Therapy (MOL) from a Clinical Psychologist, Trainee Clinical Psychologist, or Assistant Psychologist.

8.2. Measures

The *Patient Health Questionnaire (PHQ9)*; Kroenke et al., 2001): A 9-item measure of symptoms of depression. Participants rated how often they had experienced 9 symptoms over the past 2 weeks, for example, “feeling down, depressed or hopeless”, on a scale of 0, “never”, to 3, “every day”. Kroenke et al. (2001) report excellent 48 hour test-retest reliability ($r = .84$). A score of 10 or more has 88% sensitivity and 88% specificity for major depression (Kroenke et al., 2001). In this study, $\alpha = .90$.

The *Generalized Anxiety Disorders questionnaire (GAD7)*; Spitzer et al., 2006): A 7-item measure of symptoms of anxiety. Participants were asked to rate how often they had experienced 7 symptoms in the past 2 weeks, for example,

“worrying too much about different things”, on a scale of 0, “never”, to 3, “every day”. Spitzer et al. (2006) report 1 week test-retest reliability of .83 (intra-class correlation), and a strong positive correlation ($r = .72$) with the Beck Anxiety Scale (Beck, Epstein, Brown & Steer, 1988), an extended and well-validated measure of anxiety symptoms. In this study, $\alpha = .84$.

The *Readiness scale* (Lansbergen, 2011): An 8-item measure of a clients’ readiness to engage in therapy, talk about their problems, and change the way they view their problems. Participants rated agreement with statements, e.g., “I feel comfortable talking about my problems in the sessions”, on a scale of 1, “strongly disagree”, to 5, “strongly agree”. The items are presented in Table 8.1. One item was reverse scored in the calculation of the total score. Internal reliability was improved when item 4 was removed, so this item was removed before a sum was calculated for analyses; $\alpha = .67$ for the resulting scale. Scores on the Readiness scale at session 1 correlated significantly and highly with scores on a validated measure of readiness to change (see below) administered at the same time point; $r = .72, p < .001$.

Table 8.1.

Client Readiness scale items

-
1. I expect to have to talk about my problems in the sessions
 2. I feel comfortable talking about my problems in the sessions
 3. I expect I’ll have to answer the questions which my therapist asks me about my problems
 4. I feel comfortable answering the questions which my therapist asks me about my problems
 5. I try to understand and solve my own problems
 6. My therapist should understand and solve my problems
 7. I expect to change the way I view my problems
 8. I feel comfortable changing the way I view my problems
-

The *University of Rhode Island Change Assessment* scale (URICA; McConaughy, Prochaska & Velicer, 1983): A 32-item measure of motivation and readiness to change. Participants rated their agreement with statements, e.g., “it might be worthwhile to work on my problem”, on a scale of 1, ‘strongly disagree, to 5, strongly agree. Dozois, Westra, Collins, Fung and Garry (2004) also report high convergent validity in anxious samples. Higher scores on items relating to denying one’s problem correlated with reduced help-seeking ($r = -.32, p < .05$), whilst scores on items relating to active consideration of change related to increased help-seeking ($r = .33, p < .05$) and an increased awareness of the negative consequences of worry ($r = .38, p < .05$). In this study $\alpha = .80$.

The *Working Alliance Inventory – Short Form: Therapist and Client Versions* (WAIC and WAIT; Horvath, 1981; Tracey & Kokotowitc, 1989): 12-item measures of the client’s view of their working relationship with the therapist and the therapist’s view of their relationship with the client. The scale involve statements such as “we agree what is important for me to work on”, which are rated on a scale of 1, “never”, to 7, “always”. Two of the 12 items on each version of the scale were reverse coded in calculating the summed score. In this study $\alpha = .94$ for the WAIC and .91 for the WAIT. WAIC and WAIT ratings were significantly and positively correlated at session 1 ($r = .54, p < .01$).

The *Satisfaction measure*: Participants were asked to rate their level of satisfaction with each session on a scale of 0, “not satisfied at all”, to 10, “completely satisfied”.

The *Method of Levels Adherence Scale* (MOLAS; Mansell, Tai, Carey, Mullan, Spratt, & Bird, in prep.): A measure of therapist adherence to 6 key principles of Method of Levels therapy. These are: Allowing the client to choose the

problem to discuss, focusing on the client's present perception, noticing disruptions or background thoughts, asking about processes rather than content, maintaining a curious stance in their questioning, and treating the client with respect without making assumptions or offering advice. Each of the 6 items are scored on a Likert scale from 0, "absence of feature or highly inappropriate performance", to 6, "excellent performance or very good even in the face of patient difficulties". A score of 3 out of 6 on any one item indicates competent performance. In this study, the means for session 1 indicate that on average, therapists scored above the equivalent of 4 out of 6 on each item (see Table 8.2), indicating that on average, therapists displayed above competent performance. The present research utilised therapist self-ratings on the scale. In an analysis of this dataset utilising the full sample (the present study includes only participants who attended at least two sessions), the items of the scale were found to cluster into two highly inter-correlated groups of three items (Lansbergen, 2011). High and significant inter-rater agreement was observed for the cluster of three items entitled 'present-process' ($r = .47, p = .02$) (Lansbergen, 2011). In this study, the internal reliability of the scale was excellent, $\alpha = .72$.

Participants completed the PHQ9, GAD7, and readiness scales at the beginning of each session, the URICA at the beginning of the first session only, and the WAIC and satisfaction measure at the end of each session. Therapists completed the MOLAS and WAIT at the end of each session. Mean scores on each of the measures are reported in Table 8.2.

Table 8.2.

Average scores on all measures at session 1

Measure (range)	Mean	SD
PHQ9 (0 - 27)	17.67	6.91
GAD7 (0 - 21)	14.97	4.66
WSAS functioning (0 – 40)	20.28	11.44
Readiness total score (0 – 32)	27.51	3.33
Readiness item mean (1 – 5)	3.93	0.41
MOLAS item 1 (0 - 6)	4.77	0.73
MOLAS item 2 (0 - 6)	3.03	1.24
MOLAS item 3 (0 - 6)	2.85	1.23
MOLAS item 4 (0 - 6)	3.93	0.96
MOLAS item 5 (0 - 6)	5.02	0.81
MOLAS item 6 (0 - 6)	5.22	0.68
MOLAS total score (0 – 36)	24.82	0.94
Satisfaction rating (0 – 10)	7.83	1.56
Working alliance client total (12 - 74)	60	16.62
WAIC item mean (1 - 7)	5.00	1.39
Working alliance therapist total (12 - 74)	57.93	9.63
WAIT item mean (1 - 7)	4.83	0.80

Note. Item 4 removed before calculating Readiness total and item mean scores

Analysis and results

Data was analysed using hierarchical Multi-Level Modelling because of the two-level structure of the data consisting of responses at different time points nested within individuals. The SPSS Mixed software (SPSS, 2005) used for these analyses enabled the testing of models that controlled for the correlated random effects of data from the same participant at different time points. In line with Zapf et al. (1996), ‘session n+1’ levels of the outcome variable were regressed on ‘session n’ levels of the variable, along with the other predictors, in order to predict changes over time or

the variance in the ‘session n+1’ level of the variable that is not shared with ‘session n’.

All variables were standardised prior to conducting the analyses. A composite symptom score was formed from the sum of the mean item score on the PHQ9 and the mean item score on the GAD7. Model 1 tested predictors of the symptom composite score at ‘session n+1’ across participants and controlling for symptoms at ‘session n’. Model 2 tested predictors of readiness at ‘session n+1’ across participants and controlling for readiness at ‘session n’. The analyses were conducted in a hierarchical fashion, with covariates entered in Step 1 and predictors entered in Step 2. Improvement in model fit between steps was determined by the change in – 2 times the log likelihood statistic (-2LL), which has a chi-square (χ^2) distribution. Standardised beta coefficients are reported below, except for factors with greater than 2 levels. Standardised beta coefficients could not be calculated for these factors and so F statistics are reported in their place.

8.3. Session-by-session symptom change

$$\begin{aligned} \text{‘Session n+1’ symptoms}_i = & b_{0i} + b_1 \text{‘session n’ symptoms}_i + b_2 \text{age}_i + \\ & b_3 \text{gender}_i + b_4 \text{ethnicity}_i + b_5 \text{therapistcode}_i + b_6 \text{readiness}_i + b_7 \text{alliance}_i + \\ & b_8 \text{satisfaction}_i + b_9 \text{adherence}_i + \epsilon_i \end{aligned}$$

Model 1 predicted composite symptom scores at ‘session n+1’. In Step 1, ‘session n’ symptoms, age, gender, ethnicity, and therapist were entered into the model. ‘Session n’ symptoms ($\beta = .79, p < .001$) and therapist ($F = 2.97, p = .03$) were the only significant predictors. Gender ($\beta = .22, p = .11$), age ($\beta = -.02, p = .76$), and ethnicity ($\beta = .05, p = .83$) were not significant.

In Step 2, client readiness, client-rated working alliance, client satisfaction and therapist-rated adherence were entered, significantly improving model fit ($\chi^2 (4)$

= -35.63, $p < .001$). Adherence ($\beta = .03$, $p = .61$), satisfaction ($\beta = .04$, $p = .66$), and working alliance ($\beta = -.03$, $p = .77$) were not significant predictors. Client readiness was a significant negative predictor of ‘session n+1’ symptoms ($\beta = -.17$, $p = .02$).

8.4. Session-by-session client readiness change

$$\begin{aligned} \text{‘Session n+1’ readiness}_i = & b_{0i} + b_1 \text{‘session n’ readiness}_i + b_2 \text{age}_i + \\ & b_3 \text{gender}_i + b_4 \text{ethnicity}_i + b_5 \text{therapistcode}_i + b_6 \text{adherence}_i + b_7 \text{alliance}_i + \\ & b_8 \text{satisfaction}_i + \varepsilon_i \end{aligned}$$

Model 2 predicted client readiness ratings at ‘session n+1’. In Step 1, ‘session n’ readiness, age, gender, ethnicity, and therapist were entered into the model. Only ‘session n’ readiness was a significant predictor ($\beta = .74$, $p < .001$). Age ($\beta = .05$, $p = .44$), gender ($\beta = -.07$, $p = .69$), ethnicity ($\beta = -.04$, $p = .91$), and therapist ($F = 0.82$, $p = .49$), were not significant predictors of client readiness ratings at ‘session n+1’.

In Step 2, client-rated working alliance, client satisfaction and therapist-rated adherence were added to the model, which significantly improved the model fit ($\chi^2(3) = -59.10$, $p < .001$). Working alliance ($\beta = .41$, $p < .001$) and therapist adherence ($\beta = .17$, $p = .02$) were both significant predictors. Satisfaction was not a significant predictor of client readiness ratings at ‘session n+1’ ($\beta = -.11$, $p = .27$).

Discussion

The results of the current study indicate that client readiness predicts changes in symptoms between sessions over and above the effects of working alliance, therapist adherence to MOL therapy, and satisfaction. Further, therapist adherence to MOL therapy and client-rated working alliance independently predicted changes in client readiness between sessions. These findings suggest that the extent to which clients feel able to answer the therapist’s questions and potentially change the way they view their problems independently predicts session-by-session change. The

findings also suggest that this readiness can be developed by the therapist, via effective therapeutic techniques and a positive working alliance, converging with Bohart's (2000) suggestion that the function of the relationship in therapy is to encourage client involvement in therapy. If replicated, these results have implications for therapy. Crucially, clients need to feel able to openly explore their problem, feel willing to answer the therapist's questions about their problem, and recognise that they may need to change the way they view their problems. The therapist's performance and the engagement between the therapist and client may facilitate this readiness.

The results of this study challenge research suggesting that it is the therapeutic relationship or alliance that leads to outcome (e.g., Horvath & Bedi, 2002; Trepka et al., 2004), and instead suggest that alliance may relate to outcome indirectly, through its relationship with client readiness. The findings do not support the suggestion that satisfaction relates to outcomes (e.g., Perry & Bond, 2009). It may be that the aspects of therapy that lead to symptom change and the aspects that lead to satisfaction are different. For example, Llewelyn (1988) found that clients find reassurance or relief events and problem solving events helpful, whilst therapists rate insight events as most helpful. Reassurance and relief aspects of therapy might lead clients to feel more satisfied with therapy sessions, but not necessarily lead to symptom change. The present findings are aligned with research highlighting the importance of the client's engagement and readiness to change (e.g., Zuroff et al., 2007).

Interestingly, the results suggest that the most important predictor of symptom change was not a feature of the therapy or therapist but of the therapy client. This corresponds with Bohart's (2000) argument that the important common

factor in psychological therapy is the therapy client and the extent to which they are open to being active in their own recovery. This finding converges with earlier work suggesting that clients who benefit most from therapy are co-operative, open and willing (e.g., Orlinsky, Grawe & Parks, 1994). Therapy may be effective when clients are open and ready to engage in therapy to try to solve their problem because it provides the time and place to devote to working on a problem (Philips, 1984).

In the present research, along with client readiness, the therapist was a significant determinant of symptom change. The reason for the relationship between the therapist delivering the intervention and the improvements between sessions is unclear. However, it has been argued that therapist effects can occur because of the characteristics of the clients that they treat and the way clients participate in the treatment process, and also because of the varying emphasis on different aspects of the therapeutic approach they are applying, as therapists constantly modify their approach in response to feedback from clients (e.g., Krause & Lutz, 2009).

The results of this study suggest that client readiness is increased when the therapist is adherent to the guiding principles of MOL therapy and when a good working alliance is developed. A good client-therapist working alliance might be important in determining readiness because it implies that the client perceives their relationship with the therapist to be open and trusting and indicates that the client feels respected and listened to, which might intuitively make the client more likely to feel able to talk openly and answer the therapist's questions. Adherence to the principles of MOL therapy might foster client readiness for similar reasons, given that a key priority of MOL therapy is to take a respectful stance and to focus on the client's presenting problem (Carey, 2006). In addition, aspects of adherence to MOL therapy might intuitively relate to an increase in the client's willingness to change

their perspective on their problems. For example, a core aspect of adherence is assuming an understanding of clients' difficulties as an understandable consequence of the struggle with control and conflict, and asking questions which get to deeper and more personal aspects of the problem (Mansell et al., 2009). It may be that asking these questions helps the client develop awareness that there are different ways of looking at their problem, which might influence their readiness to consider alternative perspectives. It is important to note that whilst the present research only measured adherence to MOL therapy, adherence to other therapeutic modalities may also be important in fostering client readiness.

The finding that adherence to MOL principles increases client readiness which in turn predicts reductions in symptoms is in line with a Control Theory perspective on change (e.g., Higginson et al., 2011). Control theory proposes that change is necessarily self-directed; individuals need to direct and sustain their attention on goals that are blocked or in conflict; in order for change to occur (e.g., Powers, 1973). Carey (2011) likens this process to exposure, and argues that whilst individuals often avoid the aversive experience of confronting personal problems, exposure is an essential precursor to change. Carey (2011) argues that the process of exposure, or sustaining one's attention on the important aspects of one's problems, may represent a common process in therapeutic change, which may occur to varying degrees across a range of therapeutic approaches.

It was hypothesised that adherence would relate directly to symptom change, as greater adherence to the principles of MOL therapy should theoretically facilitate the exploration of high-level goals and conflicts, as the therapist keeps the client talking about the problem that is important to them and asks questions which help them consider the higher-level goals and meanings to what they describe (e.g.,

Carey, 2006). This hypothesis was not supported, although the findings suggest MOL adherence is important in determining readiness, which in turn predicts symptom change. It is possible that a combination of readiness to explore one's problem or openness to change one's perspective on the problem and a therapeutic approach that sustains the client's attention on the blocked goals or conflicts which may underlie the problem might lead to the resolution of clients' goal conflicts, which in turn may impact upon distress. Goal conflict was not measured before and after therapy in this study, meaning this possibility could not be tested. However, previous research involving individuals receiving inpatient treatment for alcohol problems found that changes in goal conflict over the course of psychotherapy predicted changes in symptoms and well-being (Hoyer et al., 2001). Future research could explore this mechanism in the context of MOL therapy and other approaches.

A number of limitations in the current study must be noted. Firstly, the variables of interest were assessed using self-report, including therapists' self-ratings of adherence. The small sample size also limits this research. However, the multi-level approach to analysis provided greater power and the results obtained in this study did reach statistical significance. In addition, participants completed a range of numbers of sessions, with some participants only attending a small number of sessions. Nevertheless, with the statistical approach employed in this research, participants did not need to complete equal or high numbers of sessions. The transdiagnostic therapeutic approach used does not require an initial period of assessment, so in this study no formalised diagnosis information is available for participants. Finally, this study utilised only one therapeutic approach, MOL, which was specifically selected based on the research hypotheses. Nevertheless, further

research will be needed to establish whether the results will generalise to other therapeutic approaches.

If the reliability and validity of the readiness and MOLAS measures can be established and these results are replicated, implications of the present findings for psychological therapies should be considered. Firstly, whilst psychotherapeutic change is often attributed to the therapist or therapy and not the client (Gianakis & Carey, 2010), the present study suggests all three are important in determining symptom improvement. Secondly, if adherence and client-rated working alliance predict increases in readiness between sessions and readiness predicts symptom improvements between sessions, therapists can capitalise on this in order to maximise the benefits of therapy, by integrating MOL principles into their clinical practice, by forming a good therapeutic alliance, and perhaps by regularly assessing and exploring client readiness and obstacles or barriers to readiness. In conclusion, the present study provides preliminary evidence to suggest that the MOL therapy approach, along with a positive therapist-client working alliance, may foster a client's readiness to explore their problems and change the way they view their problems, which in turn relates to improvements in symptoms and reduction of distress.

CHAPTER 9: DISCUSSION AND CONCLUSIONS

9.1. Introduction and overview

This thesis aimed to: a) determine whether conflict has negative consequences, b) consider the role of conflict in emotion-regulation difficulties; c) consider concepts which might relate to the reorganisation or resolution of internal conflict and their relationship to well-being, and finally d) explore the utility of interventions which seek to assist with successful reorganisation of conflict in order to improve well-being. In this chapter, an overview of the findings obtained with respect to these aims will be provided. A critical analysis of the methodology of each study was provided in Chapter 1, so in this section the strengths and limitations of the research in this thesis as a whole will be discussed. Overall conclusions will then be discussed, and the implications and practical applications of the research findings will be considered. Finally, a number of important avenues for further research will be highlighted, including some specific recommendations for future research and some detailed examples of potential research studies.

9.2. Supported and unsupported hypotheses

The research in this thesis provides support for the negative consequences of internal conflict, demonstrates the importance of conflict in emotion dysregulation, highlights two concepts that predict long-term well-being which may relate to the successful long-term reorganisation of conflict, and provides initial evidence for the utility of therapeutic approaches that directly target conflict in reducing distress. Before conducting the research reported in this thesis, five specific hypotheses were formed. These hypotheses were:

1. High and low-level goal conflict would interact to predict distress;

2. Conflict between high-level goals for emotions and behaviours would relate to problems regulating emotions and behaviours and symptoms of psychopathology, and that this effect would apply across a range of emotional and behavioural domains;
3. High and low mood would be characterised by opposing or conflicting sets of cognitions about the same mood states, and bipolar disorder would be characterised by the presence of both conflicting sets of cognitions about mood;
4. The interaction between two modes of coping with conflict, flexibility and tenacity in goal pursuit, would predict long-term well-being;
5. Therapeutic and analogue therapeutic approaches which seek to direct individuals' attention to high level goals would be useful in reducing distress.

Each of these hypotheses were supported or partially supported by the findings of the empirical studies in this thesis. These findings will now be discussed.

9.3. Novel contributions to the literature

A number of important, novel findings have emerged from the studies reported in this thesis, and each provides an original and important extension to the present literature on internal conflict. Firstly, this thesis suggests that conflict can be conceptualised from a hierarchical perspective. Secondly, conflict at different levels within a hierarchy interacted to predict distress, and this interaction effect may provide an explanation for inconsistent findings in previous research. Thirdly, conflict between high-level goals for emotion and behaviour regulation related to problems and psychopathology, and this may explain the negative effects of suppression and potentially other transdiagnostic dysfunctional processes. Fourthly, conflict between cognitions about mood states characterised bipolar disorder, suggesting conflict over emotion-regulation may underlie mood swings. In addition,

the interaction between flexibility and tenacity in goal pursuit predicted long-term well-being, suggesting the way in which individuals pursue their goals may be important in protecting against the detrimental effects of persistent conflict. Further, a validated analogue therapeutic intervention, expressive writing, was successful in reducing distress about ambivalence when individuals were asked to explore ambivalent conflicts in writing. Finally, adherence to a therapeutic approach which seeks to increase awareness of high-level conflicts predicted client readiness to change, which in turn predicted reductions in symptoms of psychopathology. Each of these primary findings will now be discussed in more detail.

This thesis commenced with an integrative literature review, which focused on conflict between goals, ambivalence over pursuing goals, self-discrepancies, and self-concordance. The literature review evaluated and integrated the existing literature on these four concepts, and a large volume of research evidence was found suggesting that whilst conflict has negative consequences for well-being, the absence of conflict or ‘self-concordance’ has positive consequences for well-being. In addition, the review also identified a series of important unanswered questions which provided the focus for the empirical chapters that followed. The literature review and model (Chapter 1) makes an important contribution to the literature on internal conflict because it provides a framework which can integrate disparate literatures on a range of internal conflict concepts, showing that they can be considered together if a hierarchical perspective is taken. A reconceptualisation was proposed of a number of well-known conflict concepts within a single, hierarchical model, based on the fundamental principles of Perceptual Control Theory (Powers, 1973). A key premise of the model was that conflict could occur at multiple levels within a theoretical goal hierarchy, which ranges from high-level, abstract, personal, superordinate goals to

low-level, concrete, subordinate daily strivings. It was contended that conflict at higher levels of the hierarchy might be more problematic, as these goals are more personalised, meaningful, and self-definitional, but also because these goals are often outside of individuals' conscious awareness, meaning that conflict may be more difficult to recognise and resolve.

Study 1 attended to an area of inconsistency in previous research identified by the literature review; the relationship between conflict amongst everyday goal strivings and well-being. This study also sought to address the previously unanswered question of whether two different forms of goal conflict, conflict between goals or strivings and ambivalence about pursuing goals, might interact to predict distress. This question was deemed important for two reasons. Firstly, the literature review revealed that the findings regarding the relationship between goal conflict and well-being were inconsistent, and it was thought that this inconsistency may have arisen because of interaction effects that had not yet been tested. Secondly, the hierarchical model suggested that these two types of conflict may occur at different levels within a goal hierarchy, and a key unanswered question was whether conflict at multiple or higher levels within a hierarchy might be more detrimental, or whether conflict across levels might interact to predict well-being. In addition, both forms of conflict could be assessed with respect to the same set of personal goals using a previously validated method (Emmons & King, 1988). The crucial finding of this study was that conflict between everyday concrete goals (low-level) interacted with ambivalence over pursuing these goals (higher-level) to predict symptoms of depression, supporting Hypothesis 1. Ambivalence about pursuing goals was only problematic for individuals whose goals or strivings did not conflict with one another. It was proposed that when individuals' goals are not in conflict, the reason

that they feel ambivalent or torn over whether to pursue these goals may arise from a deeper, less conscious cause than competition for time or resources. Distress may therefore arise either from the uncertainty caused by not knowing the reason for feeling torn over pursuing one's goals, or because there is an unresolved, higher-level conflict causing the ambivalence which the person is not fully aware of. This lack of awareness prevents the resolution of conflict (Powers, 1998).

The following studies focused more squarely on high-level conflicts, and picking up on the need for more indirect measures of conflict, sought to examine conflict more implicitly. Studies 2 and 3 explored conflicts in the context of individuals' goals and reasons to suppress or inhibit, and express or perform, different emotions and behaviours. Suppression and inhibition are commonly cited, arguably dysfunctional processes (e.g., Polivy, 1998). It was expected that suppression might only be problematic when individuals also have important, opposing reasons goals (for expression), as in this case suppression results in internal conflict. The possibility that conflict might represent a core, transdiagnostic concept was raised in the literature review. To examine this possibility, these studies involved a range of clinically-relevant emotions and behaviours, in order to test whether conflict might be detrimental across a range of domains.

Studies 2 and 3 found that highly important reasons to both express and suppress emotions and behaviours related to self-reported problems managing emotions and behaviours (Study 2) and scores on validated measures of psychopathology in the given domain (Study 3). In line with Hypothesis 2, having highly important goals for suppression was only problematic when the conflicting goals, goals for expression, were also rated as important. These effects were irrespective of the emotion or behaviour in question; effects applied across domains.

These findings suggest that firstly, conflict may be a concept with transdiagnostic relevance, with the nature of the goals in conflict determining the manifestation of distress, and secondly that it may be the presence of conflict that makes dysfunctional tendencies like suppression problematic.

Study 2 and 3 found that conflicting goals for the control of anger, anxiety and excitement related to problems managing these emotions and to symptoms of psychopathology. Study 4 and 5 sought to extend these findings by considering the role of conflict over emotion-regulation with respect to a specific disorder characterised by extreme symptoms of mood, including excitement (activation) and anger (irritability); bipolar disorder. Rather than assessing goals for the expression and suppression of different mood states, Study 4 and 5 assessed cognitions or appraisals about mood, as these theoretically drive emotion-regulation attempts (Mansell et al., 2007). In bipolar disorder, conflict between opposing appraisals of and beliefs about the same mood states may lead to conflicting emotion-regulation efforts, which cause and maintain mood symptoms (Mansell et al., 2007). Testing the importance of conflict in the context of disorders such as bipolar disorder empirically was highlighted as an important next step for research in Chapter 1.

The first of the 2 studies, Study 4, showed that two clusters of analogue bipolar symptoms were associated with unique and opposing types of appraisals about the same, activated, high mood states. Whilst positive appraisals of activated states related to increased hypomania symptoms, negative appraisals of the same states related to increased depression symptoms, even when controlling for both the other cluster of symptoms and the other type of appraisals. It was hypothesised that for individuals with mood swings, the combination of positive and negative appraisals of the same states may drive opposing emotion-regulation attempts. The

next study, Study 5, sought to test this hypothesis directly. It was found that the presence of opposing, conflicting appraisals discriminated individuals with a disorder of mood swings (bipolar disorder) from individuals with a mood disorder (unipolar depression) and non-clinical controls. It was concluded that internal conflict might be important in bipolar disorder and related disorders, as individuals' conflicting appraisals lead them to oscillate between driving their mood upwards and driving their mood downwards, which manifests as mood swing symptoms. These findings lend support to the integrative-cognitive model of mood swings described in Mansell et al. (2007), and collectively support Hypothesis 3.

Studies 1 to 5 established the importance of internal conflict in determining problems and symptoms across a number of emotional and behavioural domains and in a specific clinical context. Following on from this, the final 3 studies sought to consider the ways in which individuals' might cope with conflict and also consider two interventions which seek to directly target conflict.

One unanswered question identified in Chapter 1 was whether certain factors make conflict more or less detrimental, or make certain individuals better able to manage and reorganise conflicts as they arise. Two such factors might be tenacity and flexibility in goal pursuit (Brandstadter & Rothermund, 2002). Tenacious goal pursuit may make successful goal attainment more likely, whilst flexible goal adjustment may make individuals more likely to take a higher level perspective on their goals in order to adjust or withdraw from certain pursuits when necessary. Study 6 assessed tenacious goal pursuit and flexible goal adjustment, along with a number of indices of well-being including psychological and physical health. It was found that tenacity and flexibility interacted to predict well-being at 10-year follow up, supporting Hypothesis 4. Of the individuals who were highly tenacious in their

goal pursuit, those who were also highly flexible experienced relatively superior well-being 10 years later, compared to those low in flexibility. It was concluded that these individuals could enjoy the benefits of successful goal pursuit whilst avoiding the negative consequences of persevering unsuccessfully in blocked pursuits. Whilst it is proposed that these processes may protect against detriments to well-being over time because they may promote successful reorganisation of conflict, conflict was not assessed in this study, and so this proposition remains theoretical until further research tests this more explicitly.

The final two studies considered therapeutic approaches to conflict. Prior to conducting a study of a therapeutic approach to conflict in a clinical setting, it was deemed appropriate to examine the utility of an analogue therapeutic approach in a non-clinical sample. Study 7 aimed to explore whether expressive writing (Pennebaker, 1994), an analogue, 'self-help' approach, could be applied to the domain of internal conflict. Based on the conclusions of Study 1 that ambivalence may be distressing because individuals are uncertain as to the cause, and because the cause is potentially more deep-rooted and difficult to resolve, it was thought that an expressive writing approach might be helpful in addressing feelings of ambivalence. It was anticipated that writing in depth and in detail about ambivalent conflicts might reduce associated distress, as it may facilitate awareness of the higher-level goals causing the ambivalent conflict, which should trigger the reorganisation and resolution of the conflict (Powers, 1998). The results showed that, compared to a control condition who simply wrote about how they had spent their time that day or week, individuals who wrote about their ambivalence about pursuing personal goals reported a significant reduction in distress about their ambivalence at follow up. However, this reduction was not mediated by the extent to which individuals

discussed conflict in their writing, and parallel reductions in symptoms of psychological distress or ratings of ambivalence were not observed. It was therefore concluded that expressive writing may represent an analogue therapeutic tool which might help encourage the acceptance of ambivalence, but which may not be helpful for individuals for whom the resolution of the ambivalence is key to the resolution of their problem or for individuals experiencing significant psychological distress.

The final study in this thesis extended Study 7 by conducting an analysis over an extended time period of a therapeutic approach delivered by trained therapists to individuals experiencing clinically significant distress, such that they sought help from a primary care mental health service. Study 8 utilised a novel, transdiagnostic form of cognitive therapy in a varied, clinical sample presenting with a wide range of problems. This therapeutic approach, entitled Method of Levels therapy (MOL, e.g., Carey, 2006), was selected because the key goal of the therapy is to direct individuals' awareness to higher levels in their hierarchy of goals in order to resolve conflict and reduce distress. It was expected that adherence to the key principles of the approach might predict symptom improvements between therapy sessions. Whilst this hypothesis was not supported, adherence to MOL therapy principles, along with the client's rating of the working alliance or relationship, predicted 'client readiness', the extent to which clients reported feeling ready to engage in therapy, answer the therapist's questions and consider new perspectives on their problem. Client readiness in turn predicted symptom improvements between therapy sessions. However, a direct effect of adherence on improvements was not obtained, and the session-by-session approach to analysis precluded any conclusions being drawn about overall improvement due to the therapy. Whilst the therapeutic approach used in this study explicitly aims to address internal conflicts, conflict was not assessed in

this study, and so the extent to which the resolution of conflict predicted symptom change could not be established. This represents a priority for future research.

Thus, the findings described above offer partial support for Hypothesis 5. Further research will be necessary before it is possible to ascertain whether therapeutic approaches that direct individuals' attention to high level goals are useful in reducing distress, so possible extensions to these two studies are discussed in the future research section of this chapter.

9.4. Strengths and limitations

Before considering the conclusions that can be drawn from these findings and the implications of these conclusions, it is important to first consider the strengths and limitations of the research completed as part of this thesis. A particular strength of this thesis is the integrative literature review, which offers a valuable contribution to the literature on goal conflict, as no such review existed prior to the undertaking of this thesis. In addition, the range of methods and samples used in the empirical studies is a further strength. Across the empirical chapters a range of non-clinical and clinical groups were studied, including both young and old adults. The majority of the studies were conducted using moderate to large sized samples, with 5 of the 8 studies having over 100 participants and one of these utilising a large sample of 6,000 older adults. A further strong point of this thesis is the combination of cross-sectional and longitudinal research. The advanced analytical techniques used in some of the studies in this thesis, including multi-level analysis and mediation analysis, permitted the examination of complex relationships between variables that had not been tested in previous research. Further, the research has addressed previous gaps and areas of inconsistency in the literature. The findings also have some clear

clinical applications and relevance for therapeutic approaches to the amelioration of distress, which will be expanded upon further later in this chapter.

Nevertheless, there are some limitations to the research presented in this thesis which must be acknowledged. These limitations, and the implications for future research, will now be discussed. In all of the studies, a nomothetic approach to examining the consequences of internal conflict was adopted. This permitted the testing of processes across individuals, enhancing the generalisability of the findings. However, the absence of qualitative and idiographic methodologies is therefore a limitation of this thesis.

Another weakness of this research is the reliance on self-report measures of conflict. However, self-report methods were thought well-suited to the studies in this thesis, as they sought to explore psychological constructs and internal processes that persons other than the individual in question would be unlikely to be able to quantify and report upon. In addition, the use of implicit methods to assess conflict between self-reported goals or appraisals in a number of the studies offsets this weakness. Nevertheless, the absence of experimental and peer-report methods is a limitation.

In addition, the cross-sectional nature of some of the findings in this research is a limitation. The large scale, long-term follow-up study in this thesis (Study 6) focused on the concepts thought to be most relevant to changes in well-being over extended periods of time, however the cross-sectional designs in studies 1 – 5 means that further work needs to be done to establish the causal effect of these types of internal conflict.

A further limitation is the homogeneity of some of the samples used. The majority of the participants in each of the studies were White British, and Studies 1 – 4 and Study 7 sampled undergraduate students, the majority of whom were female.

However, it is not thought that these features of the samples used will have unduly impacted on the results, as there is no evidence to suggest that variables like internal conflict differ systematically between groups. In addition, whilst the final study in this thesis used a varied clinical sample, the clinical study of conflict over emotion-regulation only compared individuals with bipolar disorder from individuals with unipolar depression and non-clinical controls.

Finally, the two intervention studies in this thesis (Studies 7 and 8) did not have an active control condition. Thus, as yet no conclusions can be drawn about the effectiveness of interventions that seek to address conflict and promote reorganisation over other forms of therapeutic and pseudo-therapeutic interventions.

9.5. Future research

The limitations discussed above highlight that the findings of the studies reported in this thesis require further validation and extension in a number of ways. These will now be summarised, and two detailed examples of potential future studies will then be described.

It is important for future research to utilise more idiographic, qualitative, personal methods to explore in more depth the nature of internal conflict, the processes by which individuals reorganise conflict, and individual differences in the consequences of conflict for well-being. It will also be important in future research to validate and confirm the findings in these studies by using methods other than self-report, potentially by including peer-report and observer-report or by using experimental methodologies. Further research using ethnically diverse, gender balanced samples, and samples of adults who are not students, will also be necessary to ensure the generalisability of the findings in this thesis. It will be interesting in future to explore the role of conflict over emotion-regulation and conflict between

appraisals of mood across a range of other psychological disorders, for example, anger and anxiety disorders. In order to further test hypothesis 5, which was partially supported by research in this thesis, future research utilising interventions which directly target internal conflict should compare these interventions to therapeutic approaches which do not seek to promote the resolution of conflict.

In order to extend the cross-sectional research in this thesis (Studies 1 – 5), it will also be vital to conduct longitudinal studies, particularly of conflict over emotion and behaviour regulation, for example in the context of conflict over appraisals of mood and mood symptoms, or in the context of conflict between reasons for expressing and suppressing emotions and behaviours and problems in the given domain. Longitudinal studies would enable researchers to examine the stability of conflict in these domains and to consider the consequences of any changes in conflict over time, and would also permit conclusions about the causal effect of conflict on mood and psychopathology. A study could be conducted to test whether over time changes in the way individuals appraise different mood states, and the extent to which their appraisals are opposing, predicts changes in mood. Diary methods would provide rich data for this form of research. Participants could be asked to wear or carry a device (e.g., a watch or personal computer) which has an alarm set at regular intervals to remind them to complete a measure of appraisals (e.g., HAPPI; Mansell, 2006; Study 4 & 5) and a measure of current mood symptoms (e.g., the ISS; Bauer et al., 1991; Study 4 & 5) at different times each day for a period of 4 weeks, for example. Moderated regression analysis could then be used, as in Studies 2 to 5, to assess conflict between these goals and beliefs reported in the diaries and the extent to which conflict predicts changes in mood symptoms over time.

Additionally, a crucial next step will be to conduct experimental research into the consequences of internal conflict. Experimental methods would be particularly well suited to testing for the presence of internal conflict implicitly, a priority highlighted by the review (Chapter 2). One interesting context within which experimental studies might be conducted is that of conflict over emotion-regulation (see Chapters 2 – 5). In future, a study could be conducted to establish whether conflicting advice about emotion-regulation leads to uncertainty about how to regulate mood, opposing attempts to regulate mood, and either worse actual task performance or lower estimates of one's own performance.

In this study, after assessing baseline mood, participants could be randomly allocated to one of four groups, which differ in terms of the instructions given to participants. One group could be given the instruction “your current mood state is unlikely to influence your performance in this task”, another could be instructed “it will help if you can get yourself into a high, energetic mood for this task”, another told “it will help if you can get yourself into a low, calm mood for this task”, and the final group instructed “some people find that being in a high, energetic mood helps in this task, whilst others find that being in a low or calm mood is helpful”. The final condition would represent the ‘conflicting advice’ condition. All participants could then be informed that music can influence their mood and be offered the chance to listen to a piece of rousing or soothing music, or opt to skip the music altogether.

Across all four conditions, the time taken by participants to decide, and the time spent listening to each piece of music, could be measured. Participants would then be asked to complete a task that permits reliable assessment of performance, for example the working memory task used by Dunn, Dalgleish, Lawrence and Ogilvie (2007). The four experimental groups could be compared on the basis of the time

taken to decide about whether to listen to the music or which piece to listen to (uncertainty), on the basis of whether participants acted to change their mood by listening to music and the length of time spent listening to the music (emotion-regulation efforts), in addition to actual and perceived performance on the task (consequences). Participants given conflicting advice about how to regulate their mood for the task would be expected to spend longer deciding on music, might engage in potentially opposing strategies such as listening to one piece of music and then the other, might spend longer listening to the music, and may do worse on the task or feel that they have done worse on the task. The groups could then be compared using Analysis of Variance to establish whether the instructions affected the extent to which individuals experienced difficulty getting themselves into the correct mood, put more effort into trying to regulate their mood, and also whether they performed any worse on the task itself.

Experimental research of this kind would address the issue raised in Studies 4 and 5 that the question remains as to whether there is a direct association between conflict over emotion-regulation and the strategies employed to regulate one's emotions. This study would also provide a basis for further experimental research into the consequences of conflict over emotion-regulation in clinical groups, for example individuals who experience mood and mood swing symptoms, which is itself a key priority for research.

9.6. Unanswered questions

The findings of this thesis highlight several novel, untested hypotheses, and in order to test these there are a number of research avenues that could be explored further. In particular, three key areas for further study seem particularly important. Firstly, the suggestion raised by the review and model that high-level conflict is

more detrimental to well-being than low-level conflict remains untested, and testing this requires further validation of measures of high-level conflict. Secondly, it is argued that conflict might underlie other transdiagnostic, dysfunctional processes, and research is needed to substantiate this claim. Thirdly, it will be important to explore associations and overlap between the different concepts studied in this thesis including conflict, flexibility, tenacity, reorganisation, and readiness to change. These three areas for future study will now be discussed in more detail and specific suggestions will be made for future research.

The findings of the review and first empirical study signify that implicit measures of internal conflict need to be developed and refined, as it is likely that high-level, unconscious conflict has the more significant impact on well-being (Carver & Scheier, 1981, 1982). The results of Study 2 and 3 indicate that there may be promise in questioning individuals about their goals or reasons for and against certain experiences or pursuits, and the importance of these different goals and reasons, in order to implicitly assess conflict over pursuing these experiences. However, this method requires further validation across a wider range of emotions and behaviours. In addition, it is important to explore the utility of this method for assessing individuals' conflict over pursuing specific, personal, self-reported goals rather than emotions and behaviours specified by researchers.

In future studies, individuals could list the goals that they are currently pursuing, in the same way as in Study 1 and 7, and then list and rate for importance their reasons for and against pursuing each of these goals. The extent to which individuals rate both their goals for and against pursuing each goal as highly important would then represent an implicit measure of the extent to which they feel in conflict over pursuing the goal. This measure could then be validated against the

measures of ambivalence and conflict proposed by Emmons and King (1988) that were used in Study 1, and relationships with psychopathology could be explored.

In this thesis it is suggested that conflict might represent a concept which can integrate a broad range of research on dysfunctional, transdiagnostic processes and explain the mechanism by which these processes lead to distress. In order to establish an empirical basis for this suggestion, an important area of study will be exploring the role of conflict in determining the negative consequences of other well-known transdiagnostic concepts that are said to cause and maintain distress. For example, experiential avoidance (e.g., Hayes, Wilson, Gifford, Follette & Strosahl, 1996) and thought suppression (e.g., Purdon, 1999) might be problematic because they involve conflict with important reasons to allow the experiences one is striving to avoid, or to tolerate certain thoughts. Research could test this empirically by adapting measures of these constructs to include assessments of both individual's reasons to avoid experiences or suppress thoughts, and their reasons not to, and then testing for interaction effects between these two opposing sets of reasons, in the same way as in Study 2 and 3.

Alternatively, researchers could recruit a large, heterogeneous sample and collect data on a range of transdiagnostic measures such as avoidance, suppression, and rumination, and conduct factor analyses or structural equation modelling analyses to establish whether the items reduce to a single factor or core process that predicts psychopathology or distress and that may represent internal conflict. Findings from recent unpublished studies suggest that a single core process may underlie a range of transdiagnostic concepts (Bird, Mansell & Tai, 2011; Patel, 2010). Further research is needed to establish whether this single process is indicative of internal conflict.

Future research could also explore relationships between the different concepts studied in this thesis both cross-sectionally and over time. For example, in order to establish whether flexibility has positive consequences for well-being because it enables reorganisation to occur at the correct levels in a goal hierarchy (Study 6), a longitudinal study could be conducted to establish whether individuals' flexibility in their goal pursuit fully or partially mediates the effect of goal conflict on well-being or psychopathology over time. In addition, the relationship between tenacity and flexibility in goal pursuit and problem-solving tendencies which may promote reorganisation of conflict could be assessed using correlational research. One measure that could be used is the Reorganisation of Conflict scale (Higginson, 2007), which assesses individuals' tendencies to allow reorganisation, for example by taking a broad perspective on their problems or weighing up pros and cons, along with their tendencies to block reorganisation, for example by trying to rush to solve their problems immediately. Future research should seek to validate this unpublished scale and explore its associations with measures of internal conflict and the goal pursuit measures used in Study 6.

To further develop the research conducted in Study 8, it will be important to further validate the concept and measure of client readiness to change, and explore its associations with other variables, including those measured in the other studies in this thesis. One interesting question for further research will be whether readiness predicts natural recovery and recovery through self-help, along with recovery which occurs in other forms of psychological therapy. This would address the question raised in Study 8 of the possibility that readiness represents a common change process across therapies. In addition, given the theoretical stance of this thesis that internal conflict is distressing and the reorganisation of conflict should reduce

distress, and based on the finding that readiness is a key predictor of change (Study 8), relationships between readiness and indices of internal conflict (e.g., Study 1 – 3), or tendencies to promote the reorganisation of conflict as measured by the Reorganisation of Conflict scale (Higginson, 2007) or the Flexible Goal Adjustment and Tenacious Goal Pursuit scales (Brandstadter & Rothermund, 2002; Study 6) should be investigated.

Finally, in order to fully test hypothesis 5, which was only partially supported by the research in this thesis, future research should consider assessing conflict in studies of predictors of therapeutic change, and exploring there is a mediating effect of reductions in internal conflict on outcome. One study has analysed changes in conflict over the course of therapy in cognitive behaviour therapy and psychodynamic therapy, but this study utilised a complex, time-consuming measure of conflict and a homogeneous sample of in-patients in treatment for alcohol difficulties (Hoyer et al., 2001).

A potential research study to extend the research in this thesis and address the question of the mediating effect of changes in internal conflict could compare Method of Levels therapy (Study 8) to an active control condition. This study should ideally recruit a varied sample of participants experiencing a range of psychological difficulties, and should include follow-up periods after therapy is completed to permit conclusions about the longevity of any effects. The key research aims would be to establish firstly whether Method of Levels, a therapy which seeks to promote the reorganisation of conflict, is equally or more effective than another form of psychological therapy, and secondly whether any changes in internal conflict over the course of therapy mediate the effect of either therapy on outcome.

9.7. Overarching conclusions

When considering this research programme as a whole, a number of integrative, overarching conclusions can be drawn. Firstly, the review and subsequent empirical chapters suggest that internal conflict is not innocuous, but relates to overall lower well-being and symptoms of distress in a range of domains (Study 1 – 5). In particular, conflict in the domain of emotion-regulation seems to relate to problems managing certain emotions, predicts specific mood symptoms, and characterises bipolar disorder (Study 2 – 5). Conflict may represent a core transdiagnostic process, which underlies other commonly cited processes such as suppression or avoidance (Study 2 and 3). In addition, flexibility in goal pursuit may be important in terms of avoiding the negative consequences of conflict (Study 6). Flexibility in goal pursuit may relate to increased awareness of more important, high-level, long-term goals and a willingness to change or reprioritise one's lower level goals in order to meet these more important personal goals. Finally, the evidence from the final two studies (Study 7 and 8) suggest that interventions which target conflict might be helpful in reducing distress, and may facilitate awareness and reorganisation of conflict. Thus there may be promise in further developing and validating therapeutic approaches that target conflict directly.

9.8. Clinical implications

The research completed in this thesis indicates that internal conflict is a genuinely important aspect of the problems of individuals seeking psychological help. Conflict was frequently referred to or alluded to by clients in therapy when they described their problems. For example, one client involved in the final study in this thesis (Study 8) was experiencing difficulties managing his anger, and seemed to describe a sense of being in conflict over whether to express his anger or 'bottle it

up' to avoid losing control and lashing out at others. Another client who was struggling to let go of her perfectionistic ideas both wanted to be more relaxed in her parenting style to 'let her kids be kids' and wanted to be strict about ensuring her children play games together and did not play on computer games because of her idealistic goal of a 'perfect family'. Goal conflict might be particularly relevant in difficulties with emotion-regulation, as clients often seem in conflict over how to feel. For example, one client who was bereaved was torn between not wanting to feel depressed and not believing it was right to feel happy after losing her mother.

This thesis also suggests that it is not only conflict between goals that is relevant, but also conflict between reasons for performing behaviours and conflicting goals for emotion-regulation or beliefs about emotions. Thus, in attempting to understand and intervene in psychological difficulties it is important not only to consider conflict between an individuals' goals but also contradictions in their beliefs and attitudes, or conflicting reasons for acting in a certain way. In particular, this research would indicate that conflict between goals, beliefs, or cognitions about emotion are particularly relevant. Emotion dysregulation is a core aspect of many psychological disorders, and thus conflict may represent a concept that cuts across diagnostic categories, with the content of the conflict determining the nature of the distress.

When formulating the causal and maintaining factors in individuals' problems, it seems important for clinicians to consider the role of internal conflict. In line with this, Carey (2008) argues that problems arise when individuals do not feel they have control over important goals, often because of internal conflict. Carey (2008) proposes conceptualising individuals' difficulties in terms of personal goals and conflict provides integration because it offers a way in which formulations of a

wide range of difficulties can share common features. This approach to formulation is supported by the results of the studies in this thesis and is adopted by the therapeutic approach (MOL) studied in Study 8.

The MOL approach aims to help individuals shift perspectives on their problem, consider fundamental ‘meta’ goals and values, and resolve conflicts (Carey, 2008). In Study 8, adherence to the principles of this approach indirectly predicted reductions in symptoms of distress, via its influence on client readiness to change. This provides some initial evidence that addressing conflict in this way might lead to reductions in psychological distress and suggests that further investigation of this therapeutic approach is important.

The findings of this thesis also have implications for the understanding and treatment of disorders of mood swings specifically. The results of Study 4 and 5 indicate that the development of a therapeutic approach which involves the exploration and testing of conflicting beliefs and goals relating to emotions and emotion-regulation might be valuable. This therapy might involve assessing clients’ beliefs and appraisals about mood states using the HAPPI scale (Mansell, 2006), drawing attention to conflict or contradiction, or testing out clients’ beliefs about the consequences of moods and experiences using behavioural experiments (Mansell et al., 2007). An initial case series of cognitive-behavioural therapy based on this model has shown large effects on symptoms that are maintained at follow-up (Searson, Mansell, Lowens & Tai, 2011), suggesting this approach to therapy for bipolar disorders may be effective and warrants further investigation.

The findings of the research in this thesis indicate that conflict relates to distress across a range of domains, notably in the context of emotion-regulation, which implies that conflict may represent an important concept in the understanding

and treatment of a wide range of psychological problems, in line with Mansell (2005). This implies that therapeutic approaches which seek to address internal conflict may have transdiagnostic value. Developing effective transdiagnostic interventions is a priority for the fields of clinical psychology and psychiatry, given the obstacles that factors such as comorbidity (e.g., Barlow, Levitt & Bufka, 1999) and sub-threshold distressing symptoms (e.g., Johnson, Weissman & Klerman, 1992) pose to the use of disorder-specific therapeutic models. Further, when trying to maximise access to psychological therapy and make the most efficient use of therapists' time, transdiagnostic approaches which do not require a lengthy assessment period might be of particular value.

In summary, researchers and clinicians seeking to develop transdiagnostic interventions may benefit from considering the role of internal conflict in maintaining problems, and considering ways in which therapeutic approaches can promote the successful reorganisation of internal conflict. When seeking to address a range of psychological problems therapeutically, the findings of this research suggest that targeting conflict directly, bringing contradictions and conflict into sharp relief, and increasing individuals' awareness of their high-level needs and motivations might be helpful, as this would allow the successful and long-term reorganisation of internal conflict to take place.

9.9. Summary and Conclusion

This thesis makes a substantial, original contribution to the study of the relationship between internal conflict and well-being. The findings of this research have demonstrated that conflict has negative consequences, conflict over emotion-regulation seems particularly relevant in the context of emotion dysregulation, and goal pursuit processes that may promote the resolution of conflict predict long-term

well-being. This research suggests that there may be promise in developing therapeutic interventions that seek to assist in the high-level reorganisation of conflict. The original research, reported in the subsequent empirical chapters, addressed previous areas of inconsistency and explored novel themes including interactions between concepts, implicit indices of conflict, conflict over emotion-regulation, and interventions which seek to promote the reorganisation of conflict. This thesis also provides a new framework, which integrates diverse literatures on internal conflict, and through which internal conflict can be conceptualised from a theoretically-grounded, hierarchical perspective. It is suggested that internal conflict may be the defining feature that characterises dysfunctional behaviours or thinking styles that maintain mental health problems. It is argued that it is not the behaviour or thought process itself that is detrimental but rather the extent to which it involves conflict with other important goals. This perspective provides an integrative explanation for the way in which a multitude of processes might maintain distress in a range of domains and involves a shift in the way dysfunctional processes are conceptualised. A range of directions for future research and potential future studies have been described that would both extend the individual studies in this thesis. Research of the kind described in this chapter would also allow firmer conclusions to be drawn about the hierarchical nature of conflict and the possibility that conflict may underlie numerous dysfunctional processes. This thesis advances the literature on internal conflict and its relationship to well being. It is hoped that continuing research in this domain will expand upon the work completed in this thesis.

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APPENDICES

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Appendix 1.

Scores on measures from Study 1 (Chapter 2)

	M	s.d.
DASS-stress	6.58	4.39
DASS-anxiety	2.98	3.02
DASS-depression	4.56	4.37
Mean conflict	2.84	.35
Mean ambivalence	4.03	.51

Appendix 2.

Scores on measures by domain from Study 2 (Chapter 3)

		M	s.d.
Anger	Importance of reasons to express	7.09	2.09
	Importance of reasons to suppress	5.73	2.12
	Problem managing domain	3.28	2.48
Anxiety	Importance of reasons to express	5.92	1.98
	Importance of reasons to suppress	6.64	2.04
	Problem managing domain	4.99	2.69
Excitement	Importance of reasons to express	8.58	1.17
	Importance of reasons to suppress	3.88	2.31
	Problem managing domain	1.98	2.17
Eating tasty food	Importance of reasons to express	7.77	1.92
	Importance of reasons to suppress	5.23	2.82
	Problem managing domain	4.09	2.87
Drinking alcohol	Importance of reasons to express	5.82	2.62
	Importance of reasons to suppress	6.16	2.40
	Problem managing domain	1.64	2.17
Spending money	Importance of reasons to express	6.82	2.10
	Importance of reasons to suppress	5.19	2.14
	Problem managing domain	4.32	2.69

Appendix 3.

Scores on symptom and well-being measures from Study 2 (Chapter 3)

	M	s.d.
Total PHQ-9 depression	15.26	4.34
Total GAD-7 anxiety	11.53	3.84
Total SWLS well-being	23.18	6.61

Appendix 4.

Scores on measures by domain from Study 3 (Chapter 3)

		M	s.d.
Anger	Importance of reasons to express	7.41	2.04
	Importance of reasons to suppress	5.66	2.31
	Problem managing domain	3.28	2.30
	BAAQ-anger total	7.96	3.66
Anxiety	Importance of reasons to express	5.75	2.29
	Importance of reasons to suppress	6.29	1.99
	Problem managing domain	4.68	2.54
	GAD7-anxiety total	4.16	2.89
Excitement	Importance of reasons to express	8.32	1.57
	Importance of reasons to suppress	4.16	2.29
	Problem managing domain	2.20	2.32
	MDQ- hypomania total	5.09	4.19
Eating tasty food	Importance of reasons to express	7.60	2.22
	Importance of reasons to suppress	4.91	2.67
	Problem managing domain	3.85	3.16
	SCOFF-eating problems total	0.75	0.67
Drinking alcohol	Importance of reasons to express	5.55	2.67
	Importance of reasons to suppress	5.75	2.87
	Problem managing domain	1.64	2.25
	AUDIT alcohol use total	10.35	5.41
Spending money	Importance of reasons to express	6.45	2.23
	Importance of reasons to suppress	5.13	2.27
	Problem managing domain	3.47	2.70
	CBS compulsive buying total	5.93	3.56

Appendix 5.

Scores on measures from Study 4 (Chapter 4)

	M	s.d.
HAPPI – positive items	505.58	197.76
HAPPI – negative items	144.44	105.36
ISS – activation	13.80	9.05
ISS – depression	4.52	4.79

Appendix 6.

Scores on measures by group from Study 5 (Chapter 5)

	HAPPI – positive items		HAPPI – negative items	
	M	s.d.	M	s.d.
Bipolar	623.24	294.74	262.12	147.41
Unipolar	467.97	214.51	98.00	69.49
Control	323.88	182.39	66.00	56.72

Appendix 7.

Scores on measures at Time 1 and Time 2 from Study 6 (Chapter 6)

	M	s.d.
FGA-flexibility time 1	17.66	3.71
TGP-tenacity time 1	17.87	3.82
CESD-depression time 1	16.37	15.64
CESD-depression time 2	13.56	14.33
Hostility time 1	1.77	2.65
Hostility time 2	1.15	2.26
Physical symptoms time 1	4.19	3.37
Physical symptoms time 2	8.33	5.13